GOVT. COLLEGE FOR WOMEN SRINAGAR

LIBRARY

Class No. 330

Book No. G 97 F

Acc. No. 1119

117

FIRST PRINCIPLES OF ECONOMICS

1119

BY

RAM NARAYAN GUPTA, M.A.

DIP. ED (LEEDS) GOLD MEDALIST

Queen's College, Benares

AND

SHANKAR LAL AGARWAL, M.A., B.Sc.

Colvin College, Lucknow

Formerly, Lecturer in Economics, Allahabad University

Joint author of 'Elementary Statistics'

124

[FURTHER REVISED EDITION]

GOVT. COLLEGE FOR WOMEN
TEXT BOOK LIBRARY
Acc No.....
Date.....
SATNAGAR.

THE INDIAN BOOK DEPOT

LUCKNOW

1946

Fourth Edition] [*Price Rupees Seven*

Cat.

330
G 97 F

330
G 96 F
Acc. no: 1119

Printed by K. Mitra at the Indian Press, Ltd., Allahabad
and published by the Indian Book Depot, Lucknow.

A. 15. E

330

G 95 F

FOREWORD

I am convinced that this little book on economics will prove a path-finder for many an intermediate student who has hitherto found himself lost in the jungle of economic technicalities and the fog of cloudy, vague ideas.

The authors have explored the forest thoroughly themselves in their long experience as teachers, and have examined many new ways of avoiding the pitfalls. As usually happens when one is making a new path in the mountains, there are signs of some by-paths which the authors thought they might use and then abandoned; but on the whole the path leads directly and charmingly from one point of interest to another. If, in some cases, the new path-way is a little longer than that formerly used, it is only to permit the student to climb to some vantage-point by gentle ascents and gradual additions to his knowledge, where formerly he was forced to clamber up over steep cliffs or rough rocks.

The authors are to be congratulated on the care with which they have made the path-way clear and pleasant even to the stupidest, while at the same time the student is made to realize the nature of the pitfalls and difficulties he has avoided.

C. D. THOMPSON
Professor of Economics
Allahabad University

PREFACE TO THE SECOND EDITION

The great patronage extended to this book both by the teachers and the students has encouraged the authors to bring out its second edition in such a short time. To make the book more serviceable, Indian economics has also been introduced while special care has been taken to avoid confusing masses of figures and unnecessary lengthy descriptions of Indian conditions. Illustrative diagrams, instructive maps and a few pictorial charts have been inserted at proper places to render the subject interesting and illuminating to the beginners. The book is now self-sufficient for the Intermediate students for whose convenience typical questions of the Intermediate standard have been given at the end of each chapter.

Though an attempt has been made to help the students base their knowledge of economics on reliably firm foundation by presenting this treatise to them, no claim is made by the authors to have explored any dark regions of economics, nor has any unconventional track been followed by them. The book is simply the fruit of their hard and thoughtful deliberations on the subject with which they have long been associated as students and teachers. Guided by the one desire of providing a simple and yet an accurate representation of the first principles, they have followed, in the lay-out of the book, the gradual de-

velopment of thought rather than any prescribed course of study. They will, therefore, consider their efforts amply rewarded, if the Intermediate students, for whom it is primarily meant, find the treatment of the subject in this book attractive and stimulating, and derive the real benefit of acquiring the correct knowledge of the elementary principles of economics, and an insight into the economic problems of India.

The authors are deeply indebted to Mr. C. D. Thompson, ex-professor of economics, Allahabad University, who by his example inspired them as his students and also kindly introduced this little book to the readers of economics.

S. L. AGRAWAL
R. N. GUPTA

July 1, 1938

PUBLISHERS' NOTE TO THIRD EDITION

The Second Edition of the book was received by teachers and students even with more open arms than its first edition. This was very encouraging and the publishers now place in the market its third edition.

The authors have thoroughly revised the book and have considerably enlarged it to make the book self-sufficient for intermediate students.

CONTENTS

INTRODUCTORY

Pages

THE SUBJECT-MATTER AND SCOPE OF ECONOMICS ... 1—25

§ 1. What is Economics? § 2. Is Economics the Science of Wealth? §3. Economics is a Social Science. § 4. Definition of Economics. § 5. Goods and Wealth. § 6. Wealth. § 7. Classification of Wealth. § 8. Consumption and Production. § 9. Consumption and Exchange. § 10. Consumption and Distribution. § 11. Production and Exchange. § 12. Production and Distribution. § 13. Exchange and Distribution. § 14. Economics and Sociology. § 15. Economics and Ethics. § 16. Economics and Politics. § 17. Economics and Law (Jurisprudence). § 18. Economics and History. § 19. Economics and Geography. Exercises.

CONSUMPTION

CHAPTER I

THE FOUNDATIONS ... ... 29—36

§ 1. Consumption as a Department of Economics. § 2. Importance of Consumption. § 3. Satisfaction. § 4. Consumption. § 5. Utility. § 6. Consumption and Utility. § 7. Utility goes with human desire. § 8. Utility differs with different uses. § 9. Utility increases with the growth of knowledge. § 10. Utility is altered with an alteration in form. § 11. Utility varies with a change in time. § 12. A change in place leads to a change in Utility. § 13. A change in ownership brings about a change in Utility. Exercises.

Pages

CHAPTER II

HUMAN WANTS ... ... 37—53

§ 1. Wants. § 2. Wants and Activities. § 3. The growth of Wants and Civilization. § 4. Wants in general are insatiable. § 5. Wants taken singly are satiable. § 6. Wants for rival commodities are competitive. § 7. Wants for allied commodities are complementary. § 8. Wants tend to become a matter of habit. § 9. Necessaries. § 10. Comforts. § 11. Luxuries. § 12. Necessaries. Comforts and Luxuries are relative terms. § 13. Basis of efficiency. § 14. Basis of expenditure and utility. § 15. Basis of elasticity or variation in consumption. Exercises.

CHAPTER III

GRATIFICATION OF WANTS ... ... 54—68

§1. Law of Diminishing Utility. §2. Assumptions in the Law. §3. Formal Statement of the Law. § 4. Exceptions to the Law. § 5. The Margin. § 6. Marginal and Total Utility. § 7. The Marginal Utility of Money. § 8. Consumer's Surplus. Exercises.

CHAPTER IV

GRATIFICATION OF WANTS (*Contd.*) ... ... 69—78

§1. Law of Equi-marginal Utility. § 2. Actual Expenditure and the Law. §3. Importance of the Law. § 4. Money and Satiety. Exercises.

CHAPTER V

FAMILY BUDGETS ... ... 79—93

§ 1. Family budgets. § 2. Engel's Law of Family Expenditure. 1. How to collect Budget Information. 2. Purposes served by Family Budgets. Exercises.

Pages

CHAPTER VI

STANDARD OF LIVING ... ... 94—102

§ 1. Meaning of Standard of Living. § 2. High and Low Standard of Living. §3. Expensive and Cheap standard of Living § 4. Standard of Living in India. § 5. Causes of Low Standard of Living. § 6. Is the Standard of Living in India Rising? § 7. Standard of Living and the War. § 8. Standard of Living of Working Classes. Exercises.

CHAPTER VII

SOCIAL SIDE OF SPENDING ... ... 103—118

§ 1. Spending and Saving. § 2. Relation Between Spending and Saving. § 3. Saving and Hoarding. § 4. Individual Expenditure and Social Well-being. § 5. The Problem of Luxuries. § 6. Social Interference in Individual Expenditure. § 7. How best to spend one's Income? § 8. Importance of Savings. § 9. Investment of Savings. § 10. Taxes and Charities. § 11. Marketing. § 12. Application of the Law of Equi-marginal Utility. § 13. What is "Waste"? § 14. War and Consumption. Exercises.

PRODUCTION

CHAPTER I

PRODUCTIVE EFFORT ... ... 121—127

§ 1. Meaning of Production. § 2. More productive and less productive effort. Exercises.

CHAPTER II

REQUIREMENTS OF PRODUCTIVE EFFORT ... 128—151

§ 1. Land, Labour and Capital. § 2. Land and Labour as essential requirements. § 3. Land. § 4. Importance of Land. § 5. Labour. § 6. Capital. § 7. Capital, Wealth and Money. § 8. Origin of Capital.

Pages

§ 9. Forms of Capital. § 10. Land as Capital. § 11. Functions of Capital. § 12. Growing Importance of Capital. § 13. Labour. § 14. Capital. § 15. Relative Importance of Land, Labour and Capital. § 16. Organization. § 17. Functions of an Organizer. § 18. Need of Organization. § 19. Importance of Organization. § 20. Need of Enterprise. § 21. Enterprise Falls on Capital. § 22. Enterprise. § 23. Double Function of the Entrepreneur. Exercises.

CHAPTER III

LAND IN INDIA ... ... 152—184

§ 1. Extent of Land. § 2. Geographical Location of India. § 3. The Himalayan Region. § 4. The Indo-Gangetic Plain. § 5. The Deccan Plateau. § 6. The Coastal Strips. § 7. Climate and Rainfall. § 8. Influence of Climate. § 9. Rainfall. § 10. Importance of Rainfall. § 11. Soil. § 12. Forests. § 13. Vegetable Products. § 14. Minerals. § 17. Sources of Power. Exercises.

CHAPTER IV

LABOUR IN INDIA ... ... 185—204

§ 1. Population. § 2. Density of Population. § 3. Causes of Variation of Density. § 4. Vital Statistics. § 5. Causes of High Birth-Rate. § 6. Causes of High Death-Rate. § 7. Distribution on the basis of occupation. § 8. Distribution on the basis of age. § 9. Distribution on the basis of country and town. § 10. Malthusian Theory of Population. § 11. Is Malthusian Theory Operative? § 12. Malthusian Theory and India. § 13. Optimum Theory of Population. § 14. Is India Over-populated? Exercises.

Pages

CHAPTER V

CAPITAL IN INDIA ... ... 205—218

§ 1. Live-stock. § 2. Agricultural Implements. § 3. Buildings and Machinery. Irrigation Works. § 4. Canals. The Government Works . Types of Canals. § 5. The Punjab Canal Colonies. § 6. Wells. § 7. Tanks. § 8. Advantages of Irrigation. § 9. Disadvantages of Irrigation. § 10. Scope for Irrigation. Exercises.

CHAPTER VI

EFFICIENCY OF THE FACTORS OF PRODUCTION WITH REFERENCE TO INDIA ... ... 219—232

§ 1. Efficiency of Land. § 2. Efficiency of Capital. § 3. Efficiency of Labour. Power to Work. Will to Work. § 4. Efficiency of Organization. § 5. Internal and External Economies. § 6. Efficiency of Indian Labour. Inefficiency of Factory Labour. Inefficiency of Farm Labour. Exercises.

CHAPTER VII

DIVISION OF LABOUR AND LARGE-SCALE PRODUCTION ... ... 233—255

§ 1. Meaning of Division of Labour. § 2. Forms of Division of Labour. § 3. Advantages of Division of Labour. § 4. Disadvantages of Division of Labour. § 5. Advantages of Machinery. § 6. Disadvantages of Machinery. § 7. The Causes of Localization of Industries. § 8. Advantages of Localization of Industries. § 9. Disadvantages of Localization of Industries. § 10. Meaning of Large-Scale Production. § 11. Economies of Large-Scale Production. § 12. Limitations of Large-Scale Production. Exercises.

Pages

CHAPTER VIII

THE LAW OF DIMINISHING RETURNS ... 256—268

§ 1. Diminishing Returns. § 2. Causes of Diminishing Returns. § 3. The Law as applied to mining and quarrying. § 4. The Law as applied to fishing. § 5. The Law as applied to manufactures. § 6. The tendency of diminishing returns counteracted. § 7. Increasing Returns. § 8. Constant Returns. § 9. The Law of Constant Returns is only hypothetical. § 10. The Law of Diminishing Returns operates in all industries. § 11. The Law of Equi-Marginal Productivity. Exercises.

CHAPTER IX

GROWTH OF ECONOMIC EFFORT AND TYPES OF BUSINESS MANAGEMENT ... ... 269—281

1. Hunting and Fishing Stage. 2. Pastoral or Nomadic Stage. 3. Agricultural State. 4. Stages in the Development of Industrial Effort: (1) Family Economy or the Home Industry System. (2) Handicraft System. (3) Factory System. 5. Types of Business Organization: (1) Individual Ownership-(2) Partnership. (3) Joint-Stock Company. (4) Co-partnership. (5) Cooperative Production. (6) Government Enterprise. Exercises.

CHAPTER X

ECONOMIC TRANSITION IN INDIA ... ... 282—288

§ 1. Old and New Economic Order. § 2. Characteristics of the Old Economic Order. § 3. Characteristics of the New Economic Order. § 4. India in the Transitional Stage. § 5. The Village in Transition. § 6. Transition in Industries. Exercises.

Pages

CHAPTER XI

LARGE-SCALE INDUSTRIES ... ... 289—307

§ 1. Cotton. § 2. Jute. § 3. The Woollen Industries, § 4. Silk. § 5. Iron and Steel. § 6. Engineering Industry. § 7. Sugar. § 8. Matches. 9. Cement, § 10. Paper. § 11. Glass. § 12. Leather. § 13. Film Industry. § 14. Minor Industries. § 15. Plantation. Exercises.

CHAPTER XII

AGRICULTURE AND COTTAGE INDUSTRIES ... 308—321

1. Agriculture: §1. Soil and Manure. § 2. Seed. § 3. Capital. § 4. Irrigation. § 5. Labour. § 6. Organization. § 7. Marketing Facilities. 8. Central Agricultural Marketing Department. 2. Cottage Industries. § 9. Causes of Decline. § 10. Types of Cottage Industries § 11. Handicaps and Remedies. Exercises.

CHAPTER XIII

RURAL INDEBTEDNESS ... ... 322—338

§ 1. Agricultural Causes. § 2. Economic Causes. § 3. Social Causes. § 4. War and Indebtedness. Exercises.

EXCHANGE

CHAPTER I

EXCHANGE AND VALUE ... ... 341—348

§ 1. Exchange Defined. §2. Kinds of Exchange. § 3. The Conditions of Barter. § 4. Gain in Utility by Exchange. § 5. Difficulties in Exchange by Barter. § 6. The Place of Exchange in Modern Economic Life. § 7. Value. § 8. Value of Money. § 9. Value and Utility. Exercises.

Pages

CHAPTER II

DEMAND SUPPLY ... ... 349—366

§ 1. Desire, Want and Demand. §2. Demand Defined. § 3. Demand Price. § 4. The Law of Demand. § 5. Demand Schedule. § 6. Demand Curve. § 7. Collective or Social Demand, or Demand in a Market. § 8. Elasticity of Demand. § 9. Measurement of Elasticity of Demand. § 10. Elasticity of Demand and Price. § 11. Elasticity of Demand for Necessities. § 12. Elasticity of Demand for Comforts and Luxuries. § 13. Substitutes and Elasticity of Demand. § 14. Commodities having Several Uses and Elasticity of Demand. § 15. Joint Demand. § 16. Direct and Derived Demand. § 17. Composite Demand. § 18. Supply. § 19. The Law of Supply. § 20. Supply Schedule. § 21. Supply Curve. § 22. Joint Supply. § 23. Composite Supply. § 24. The Cost of Production. § 25. Change in the Expenses of Production. Exercises.

CHAPTER III

BALANCING OF DEMAND AND SUPPLY ... 367—376

§ 1. How to Determine the Price of a Commodity in the Market? § 2. Buyer's Maximum. § 3. Seller's Minimum. § 4. Higgling and Bargaining. § 5. Competition on Demand Side. § 6. Competition on Supply Side. § 7. Double-sided Competition. § 8. Price Curve. § 9. Demand, Supply and Price. Exercises.

CHAPTER IV

MARKETS ... ... 377—391

§ 1. Market Defined. § 2. Competition. § 3. Types of Markets. § 4. Extent of Markets. § 5. Periodic Markets. § 6. Very Short-Period Price. § 7. Short-Period Price. § 8. Long-Period Price. § 9. Long-Period Price and Normal Price. Exercises.

Pages

CHAPTER V

TRANSPORT IN INDIA ... ... 392—405

1. Transport. § 1. Importance of Transport. 2. Means of Transport. § 2. Road Transport. § 3. Railways. § 4. Waterways: Marine Transport; Inland Waterways. § 5. Airways. Exercises.

CHAPTER VI

INTERNAL AND EXTERNAL TRADE OF INDIA ... 406—423

§ 1. Inland Trade. § 2. Coastal Trade. § 3. Seaborne Trade. § 6. Important Features of India's Foreign Trade. § 7. Overland Trade. § 8. Direction of India's Foreign Trade. § 9. Commercial Intelligence and Statistics. Exercises.

CHAPTER VII

MONEY ... ... 424—453

§ 1. Definition of Money. § 2. The Qualities of a Money Commodity. § 3. Functions of Money. §4. Kinds of Money. § 5. Metallic Money. § 6. Free, Gratuitous and Limited Coinage. § 7. Debasement. § 8. Appreciation and Depreciation of Money. § 9. Effect of Price Fluctuations. § 10. Index Numbers. § 11. Paper Currency. § 12. Advantages of Paper Money. § 13. Monetary Standards. § 14. Gresham's Law. § 15. Limitations of the Law. § 16.Indian Currency System. Exercises.

CHAPTER VIII

CREDIT ... ... 454—467

§ 1. What is Credit? § 2. Credit Instruments. § 3. Uses of Credit. § 4. Banks. Exercises.

Pages

CHAPTER IX

BANKING IN INDIA ... ... 468—487

§ 1. Types of Banks in India. § 2. Commercial or Joint-Stock Banks. § 3. Exchange Banks. § 4. Industrial Banks. § 5. The Reserve Bank of India. §6. Constitution and Management of the Bank. § 7. Functions of the Bank. § 8. Agreement with the Imperial Bank of India. § 9. Cooperative Societies. § 10. Aim. § 11. Principles of Cooperation. § 12. Working Capital. § 13. Loans to Members. §14. Progress of the Movement. § 15. Benefits of Cooperative Movement. § 16. Drawbacks of Cooperative Movement. § 16. Drawbacks of Cooperation. § 17. Suggestions.

DISTRIBUTION

CHAPTER I

THE PROBLEM OF DISTRIBUTION ... ... 491—495

1. What is to be distributed. 2. How to Distribute the Joint Income. Exercises.

CHAPTER II

RENT ... ... 496—506

§ 1. Meaning of Rent. § 2. Why does rent arise? § 3. The Law of Rent. § 4. Rent will arise even if all land was of a uniformly high quality. § 5. Rent on extensive margin. § 6. Contract Rent. § 7. Changing Margin. § 8. The Position of the margin as affecting rent. § 9. Price of produce and rent. § 10. The effect of improvements in the art of cultivation on rent of agricultural land. § 11. Social progress and rent. § 12. Rent and the cost of production. Exercises.

Pages

CHAPTER III

LAND REVENUE SYSTEM IN INDIA ... ... 507—514

§ 1. The law of rent as applicable to Indian conditions. § 2. Land tenure. § 3. Tenants in U.P. § 4. Features of good land tenure system. Exercises.

CHAPTER IV

WAGES ... ... 515—528

§ 1. Meaning of Wages. § 2. Is labour a commodity? § 3. Demand for labour. § 4.Supply of labour. § 5. Determination of wages. § 6. Disadvantages of labourers in bargaining with the employer. § 7. High Wages and low Cost. § 8. Time- and piece-wages. § 9. Real and nominal wages. Exercises.

CHAPTER V

INTEREST ... ... 529—536

§ 1. Demand for Capital. § 2. Demand price of Capital. § 3. The Supply of Capital. § 4. Supply price of capital. § 5. Determination of the rate of interest. § 6. Net and gross interest. § 7. Variation in gross interest. Exercises.

CHAPTER VI

MOBILITY OF LABOUR AND CAPITAL ... ... 537—547

§ 1. Mobility of Labour. § 2. Mobility of Labour in India. § 3. Mobility of Capital. § 4. Mobility of Capital in India. § 5. Lack of Mobility of Indian Capital. Exercises.

Pages

CHAPTER VII

PROFITS ... ... 548—552

§ 1. Gross and Net Profits. § 2. What is Profit? § 3. Wherein does the risk lie? § 4. Factors which create risk. § 5. Inequality in profits.

PUBLIC FINANCE

PUBLIC FINANCE ... ... 555—591

§ 1. State Functions. § 2. Public Finance. § 3. Public Revenue. § 4. Public and Private Expenditure. § 5. Tax. § 6. Tax, Fees and Special Assessment. §7. Canons of Taxation. §8. Direct and Indirect Taxes. § 9. Advantages of Direct Taxes. § 10. Disadvantages of Direct Taxes. § 11. Merits of Indirect Taxes. § 12. Demerits of Indirect Taxes. INDIAN FINANCE: § 13. Before the Great War. § 14. Montague-Chelmsford Reforms. § 15. Meston Award. § 16. The Reforms Act of 1935. § 17. The Niemeyer Award. § 18. Central Government. § 19. Other Taxes and Duties. LOCAL SELF GOVERNMENT AND LOCAL FINANCE. § 20. Village Autonomy. § 21. District Administration. § 22. Local Self-Government. § 23. Functions of Municipalities. § 24. Sources of Municipal Revenue. § 25. Functions of District Boards. § 26. Sources of District Board Revenue. Exercises.

INTRODUCTORY

INTRODUCTORY

THE SUBJECT-MATTER AND SCOPE OF ECONOMICS

1. The Meaning of Economics

Before the study of a new subject is taken up, the beginner is naturally anxious to know what its name means and what it is about. For this reason, this opening chapter of the book is devoted to the meaning of the term 'economics' and to the discussion of its subject-matter.

§ 1. **What is Economics?** The term 'economics'[1] is formed from the noun 'economy'[2] which is derived from the Greek language Literally it meant 'management of the household.' The difference between good and bad management made a great difference in the

[1] Economics was first called 'Political Economy.' The Greeks used the word 'polis' to mean the city-state, and a city of ancient Greece was an independent state, managing its own affairs. Hence 'politics' came to mean the management of the affairs of the city. Originally, therefore, the name 'Political Economy' was intended to convey the idea of applying the principles of household management to that of the city or state. Just as a housewife would conserve and make full use of the household income, so was the statesman expected to do with the aid of 'Political Economy' which was supposed to set out rules for his guidance in the matter of improving the welfare of mankind. 'Political Economy' is really equivalent to 'National Economy,' but during recent years the older name 'Political Economy' has fallen into disuse, because the word 'political' has lost its original significance. 'Political' now stands for Governmental action and regulation, and in this connection we speak of political science or politics. To avoid confusion of idea arising out of the term 'political,' 'Political Economy' has been given up for 'Economics' which is in vogue now.

[2] Economy comes from two Greek words, 'Oikos'=a house, and 'Nomos'=a law.

well-being of a Greek household. The work of management consisted in getting the requirements of the household with as little effort and sacrifice as possible, and in using them with the greatest wisdom and judgment. Today when the use of money is universal, housekeeping means only the management of household expenditure. Hence in modern times the business of economics is to study how a man gets his income which is mostly in terms of money, and how he uses it.

One important fact about life is that no human being can get on without food, clothing and shelter. Every one of us must have not only air to breathe and water to drink, but also food to eat, clothes to wear, a roof to shelter and many other things besides. Whatever our caste or creed, age or occupation, wants we all have, no matter whether they are more or less, simple or varied. 'How these wants arise and how they are satisfied' is one of the main problems, a systematic inquiry into which is what economics seeks to carry out. Since human motives can conveniently be measured through money, economics considers those and only those wants of man which can be brought directly or indirectly into relation with the measuring-rod of money.

These wants form the very foundations of the so-called economic activities which man is prompted to undertake with a view to satisfy them. Men and women, boys and girls, all are striving hard to earn what we call a 'living.' Most of the waking hours of their brief lifetime are spent in trying to deal with the problem of bread and butter. To students who have their bread and butter supplied to them by their parents or guardians, this problem may not appeal to be as important and urgent as to those who have to earn their bread and butter. They understand its importance not in their student life but at a time when they go to settle in life after finishing their studies in schools or colleges. Only then they realise how hard

they have to struggle to make both ends meet. Not to speak of students, every human being in this world is concerned with such problems as how to get food to eat, house-room to live in and clothes to keep him warm or at least cover his nakedness.

Each individual, in the course of a single day, finds himself in various capacities. He is an earner of his living, and at the same time a member of his family, a member of a state and also a member of the big human society. Consequently he is engaged in all sorts of activities, economic, patriotic, social, and in addition to these, religious, philanthropic, artistic and others. But of all these activities, those concerned with the earning of a living have by far the most urgent call on him, because they help him in keeping his body and soul together without which none of his activities can possibly come into being. It should not, however, be supposed that if he is engaged in earning his bread and butter, he ceases, for the time being, to be a brother, or a son, or a teacher, or a student, or a subject of the state. Life of a man is supported by several motives all acting together, as if it were a ball upheld in a position by several springs all working simultaneously. Hence it would be wrong to assume that he is actuated by the one motive of money-making and by no other in his activities at one time or at all times. Other motives may also predominate at a particular time; for instance, while attending to the needs of the members of his family, a person may have only one motive of love and affection which is more prominent than all others, and the same person on the play-ground may have no other outstanding motive than that of recreation. Beginners, however, would do well, for the facility of a clear grasp of the subject. to leave out all other motives except the economic motive at the time of considering human behaviour, although in the interest of strict accuracy all the motives must be taken into account.

The chief motive of man being the preservation of his life, the problem of bread and butter engrosses his greatest attention and therefore economics may be regarded as essentially the science of bread and butter. When the world was young, its people were grouped into many small communities living in villages. Each village was self-sufficient more or less, for its people grew their food, raised their cotton or wool and made their cloth, or went without things if they could not secure them. They were not inter-dependent like us for their requirements. To them the problem of bread and butter was easily solved. At least it was not so complicated as we find it today. The simple mode of living has now given way to the complex one, so that food and clothes come from long distances. The village no longer produces all that it needs but gets most of its requirements from others. The cultivator grows food not so much for himself and his family as for others. He makes no cloth, for he knows that cloth and many other things today can be made better and cheaper by others and that he can get them all by exchange. The *dhoti* which he puts on has probably been bought from his village-vendor who himself must have purchased it from some big cloth-merchant of the city, and the city merchant also must have got it from some factory either in Bombay or in some foreign country 5000 miles away in the east or in the west. Cotton must have been grown in the country-side and sold to a cotton-dealer from whom it must have gone first into a spinning factory and then into the weaving factory which has turned it into a *dhoti*. Thus the whole long line of producers was at work in the making of so simple a thing as *dhoti*. The cultivator might not at all be conscious of the fact that so many individuals were toiling in the distant corners of the earth in order that he might be psovided with a *dhoti*; but in the world as it is constituted today, people are so inter-dependent that every one of them is engaged in doing something

for others and expects others also to do something for him. This has made the problem of bread and butter so complicated that one cannot easily understand how it is solved without much difficulty for some people and not so easily for others, whether individuals or nations. A study into such problems as these forms the subject-matter of economics which inquires into the causes that provide some individuals with the niceties of life and deprive others not only of these but also of the necessities of life sometimes.

§ 2. **Is Economics the Science of Wealth?** Before an answer to the question may be returned it is necessary to know what *Wealth* is.

'Wealth' is derived from the old English word 'weal' meaning welfare. The suffix 'th' indicates a state or condition, so that 'wealth' signifies the state of well-being. Thus wealth leads to human welfare or to the satisfaction of human wants. We cannot think of wealth without thinking of man.

The adjective 'economic' means 'pertaining to wealth.' Literally speaking, therefore, economics is the science of wealth. This was the view held by earlier writers, W. S. Jevons and others. Carlyle and Ruskin went so far as to call economics the Gospel of Mammon. Wealth, it is true, plays a very important rôle in the ordinary business of life; but it has no meaning, no existence apart from man. Hence economics is 'on one side, a study of wealth, and on the other and more important side, a part of the study of man.'

§ 3. **Economics is a Social Science.**—Economics deals primarily with man and only secondarily with wealth. It deals with man not as an isolated individual, but as a social being living in an organised human society. It does not take into account the activities of ascetics who live all alone. Neither does it consider how Madho, a *single* cultivator, or Rafiq, a *single* merchant, or Joseph, a *single* clerk, carries on the activity of earning a living. It is concerned

with social activities only—with the activities of cultivators, merchants or clerks taken together. It studies men in general, may they belong to the class of cultivators, teachers, students, or any other.

Man is, by nature, a social animal. He feels natural pleasure in the company of his fellow-beings. Being constantly associated with them he develops relations and activities which are so closely knit together that he cannot do without his fellow-men. In the world of today, every individual member works to produce what someone else wants, and obtains in exchange for the product of his labour, the food, the house-room, the clothing, the recreation and all other things which he wants. Such economic activity is possible not in solitude, but in society.

§ 4. **Definition of Economics.**—Economics may be defined in various ways. The only important point to remember is that every definition must have the following fundamentals, namely—

(1) that economics is the systematic study of human wants and their satisfaction;

(2) that it considers only those activities which are related to the getting and using of wealth; and

(3) that it deals with the collective activities of men in general and not with those of isolated individuals.

The definitions given below brings out all these points clearly:—

Economics is a social science which deals primarily with man as wanting, working, getting and spending, and secondarily with wealth which, through these stages, satisfies his wants.

§ 5. **Goods and Wealth.**—The term 'goods' stands for material objects like air, water, land, etc.; for immaterial things like health, skill, intelligence, etc.: and for human services such as those of domestic

servants, musicians, doctors, soldiers etc. All desirable things are goods.

Free Goods—Air, sunlight, and a few other goods, which can be obtained in the quantity desired without any human effort, are free goods. They benefit all alike and do not make anyone richer than his neighbour. Being available in greater abundance than required, they are not exchanged. They are free gifts of Nature.

Economic Goods.—Economic goods are not freely and abundantly available. They are limited in quantity and are bought and sold: for example, wheat, shirt, house and books. They are equivalent to wealth. The poor have comparatively fewer of these than the rich; they do possess wealth though obviously not as much as the rich.

Free goods may become economic goods if a change in conditions and circumstances enables them to acquire the power of exchange. For example, air to a diver and sand in a builder's yard become economic goods though ordinarily they are not so.

§ 6. **Wealth.**—As a result of economic efforts man obtains what we call *Wealth*, a name which applies to everything that can go in exchange for some other thing. Thus this book is wealth because it can be given and also accepted in exchange for a thing belonging to someone else. When water can be had for nothing, no one would like to pay for it. It will not be an object of exchange and consequently it will not be called wealth. But if water is bought and sold, as in certain arid tracts of Rajputana, it becomes wealth there. Thus all economic goods are wealth. Free goods as such are not wealth.

Wealth has four qualities. In the first place, it has the power to satisfy a human want as otherwise none will desire to have it and it will not be exchanged: rotten eggs for example. Secondly, it must be

capable of being secured and owned. It is impracticable to obtain even a particle of that gold which is said to be in the sun, and hence that gold cannot be exchanged. Air, on the other hand, can be had freely and abundantly, but it need not be owned and is, therefore, neither bought nor sold. Thirdly, it must be external to man, because if it is inseparably bound up with the person of a man, he cannot part with it; for instance, the personal qualities of an individual, like health, skill, intelligence. Lastly, it must be scarce or available in lesser quantity than required by people. Gold is not as abundant as it is wanted; that is why people are willing to exchange some of their possessions to have a quantity of it.

§ 7. **Classification of Wealth.**—Wealth may be classified as follows:—

Individual Wealth.—The wealth of an individual consists of (i) all material goods such as landed property, buildings, shares in companies and the like which he can claim to be exclusively his own, and (ii) those immaterial goods which are exchangeable, such as the goodwill of his business, if he is a businessman, or his practice if he is a doctor or a lawyer. 'Goodwill' means the good name or the reputation which a business enjoys and which can be sold to a new owner when that business changes hands.

In calculating the wealth of an individual, his debts must be deducted from his possessions.

Collective Wealth.—It is wealth shared in common by several individuals. Public roads or street-lights which belong to no single man but are enjoyed by a person and his neighbours alike, come under this class of wealth. It may be divided into two classes: (i) Private and (ii) Public.

Private collective wealth is the wealth of all institutions such as private libraries which are owned by private associations like the possessions of a family, wealth of a partnership or private company,

or of a charitable, benevolent, educational and religious bodies.

Public wealth is all that wealth which belongs to a government body whether central, provincial or local. Roads, canals, railways and dak bungalows are some of the examples.

National or Social Wealth.—(i) In the first place, it includes the total wealth of all its individual members whether such wealth may be present in the country or without it, while the wealth in the country owned by foreigners should be excluded from this calculation. Mutual debts among the members of the community are to be omitted.

(ii) Secondly, it includes collective wealth as defined above.

(iii) Thirdly, it includes all such free gifts of Nature as the Ganges and the Himalayas in India, which are responsible, to a large measure, for making Indians happy and prosperous. The Himalayas may be considered as exchangeable in the sense that the right to use a certain portion of them falling within the territory of a ruler are sometimes bought and sold, and the Ganges for the obvious reason that its water is sold for irrigation purposes.

Cosmopolitan or International Wealth.—consists of those forms of wealth which belong jointly to all nations and singly to none as the goods belonging to the League of Nations or the open seas beyond the three-mile limit from the shores of a country.

2. Importance of the Study of Economics

Economics serves as a useful instrument for sharpening intellect by cultivating habit for a careful observation, critical analysis and sound reasoning. It broadens vision and helps a great deal in mitigating the acute strifes between the labourers and the capitalists by teaching them the usefulness of co-operation in the joint task of producing wealth.

The social reformer is able, on the basis of economic considerations, to attack social evils with a view to eradicate them. The reckless expenditure over marriages in India, and the growing use of liquors at the expense of necessaries for health and efficiency of the consumers are some of the problems which have already set reformatory forces at work. Thousands of men today are grappling with the important problem of ameliorating the miserable lot of unfortunate peasantry in this country by discovering some suitable remedy for their chronic indebtedness, by striking at the root of crushing poverty of masses with weapons both economic and political, and by providing them with the facilities and benefits of rural reconstruction work, co-operative credit societies and improved tenancy laws.

The statesman also is benefited by a sound knowledge of economics which guides him constantly to do what would help trade and commerce of the country and promote economic welfare of the people. It is economics that tells him that the existing inequalities in the wealth among different classes of society can be considerably minimised by an equitable distribution of the burden of a tax. From economics, again, he learns that wide-spread unemployment in any country leads to social unrest and economic backwardness, which ultimately stand in the way of the state duties being performed efficiently.

Similarly, the businessman may, in his own interest, turn to account his knowledge of economics. The producer, for example, who understands theoretically what evil consequences naturally follow as a result of overproduction and trade depression, will not, to the best in his power, allow himself to slip into that mistake. The banker will be on his guard against periodical crises, if he has the knowledge, even though no practical experience, of their ruinous results.

Again, the workers who are weak and incapable of offering any sort of resistance of the unjust policy of the employers can take advantage of their knowledge of economics to start a strike under most favourable conditions that terminates successfully to the great relief of the aggrieved.

It would thus appear that economics is a subject of vital importance and deserves as much encouragement as can possibly be given to it. In the High School classes of the Delhi Province it is already being taught, and it is a matter of great consolation to know that in U.P. also it is being introduced in the High School classes. To the schoolboys who will settle down later in life as statesmen, businessmen, social reformers or workers, it should prove to be of immense value.

3. Departments of Economics and their inter-relation*

For the convenience of studying economic activities of man systematically, the science of Economics has been branched off into four departments—Consumption, Production, Exchange and Distribution. The department of Consumption deals with those economic activities which are concerned with the use of wealth for the satisfaction of human wants. The department of Production covers those economic activities which are undertaken by man with the object of making things more fit for his use. The department of Exchange considers those economic activities of man which are responsible for giving an individual or a community what he or it wants in return for what he or it has produced. The department of Distribution is concerned with those economic activities of man which consist in the valuation of his service as an agent of production.

---

* The study of this section would better be postponed till the students have finished the whole book.

None of these departments is independent of the others. They are closely inter-related.

§ 8. **Consumption and Production.**—Every man is a consumer and almost every consumer is a producer. As a producer man spends energy. As a consumer he receives energy. It is obvious that he must take in at least as much energy as he gives out. Hence *consumption is necessary for production.* What is true of an individual is also true of the whole society which is made up of individuals.

Consumption is the basis of all production.—The infinite wants of man are the motor force of all economic activity. Annihilate them and the whole human activity will automatically be brought to a dead stop.

Consumption directs the course of production.—It determines what kinds of goods shall be produced, because the goods consumed vary in accordance with men's wants and preferences. Production in its turn provides the means of satisfying human wants. If goods were not produced, consumption would not be possible.

Production limits consumption.—It unfolds the amount of goods that are available for consumption, the sole purpose and end of all production. If more is to be consumed, more must be produced. It also sets a limit to the quantity of each variety of goods.

Consumption and production thus act and re-act upon each other.

§ 9. **Consumption and Exchange.**—Consumption is necessary for exchange. If man had no wants, the whole machinery of exchange would go out of gear and the activities of all sorts of middlemen, wholesalers, retailers, bankers, commission agents and a multitude of others would automatically be brought to a dead stop.

Exchange is also necessary for consumption. In the present state of society, satisfaction of human

wants is impossible to a great extent without having recourse to exchanges. Today the cultivator obtains only by exchange cloth, shoes, pots and many other things that he needs besides food which he himself grows. Not to speak of the cultivator, the weaver, the potter, the carpenter—all have to depend upon others for their requirements which they get only by exchange.

The intimate connection between consumption and exchange becomes all the more obvious when we consider that the rates of exchange depend chiefly upon the laws of demand, and the laws of demand in their turn depend upon the laws of consumption.

§ 10. **Consumption and Distribution.**—A man's habitual consumption decides how he will apportion (distribute) his income for the satisfaction of his several wants. If he is in the habit of spending more on clothing and less on food, he will lay out a large portion of his income on the purchase of clothes and a smaller portion of it on the purchase of food. If he spends more for food and less for other things he will accordingly divide his income. The distribution of income over his various needs depends partly on an individual's tastes and habits and partly on his social position. But how his income will be divided between his several needs cannot be determined, unless and until the consumer knows how great his income is going to be. For, if his income is going to be big, he may find it possible to meet all his needs more or less. But if his income is going to be small, he may have to postpone the satisfaction of some of his wants—particularly those which he does not consider to be very urgent. The question how big the income is going to be decided by distribution which determines how the joint product of society will be shared among the workers and the property owners who have united to create it. Thus it is not only consumption that determines distribution, but the converse of

it also is equally true. In fact, the two are mutually dependent.

§ 11. **Production and Exchange.**—The introduction of division of labour among producers and its further subdivision into a boundless range and an indescribable complexity on account of an increased use of machinery has made the present-day system of production so bound up together into a relationship of mutual dependence that exchange has become a necessity of far greater importance today than it used to be. Now, before a commodity is got ready for use, it has to pass through innumerable hands in its various incomplete forms. In certain cases, specialisation in any particular part of the whole has given rise to a separate industry altogether. Spinning, weaving and dyeing are separate industries, all connected with one another. They exchange their products to run the whole machinery of production.

When goods are produced, that is not the end of production. The object of production is achieved only when goods have found their way into the possession of those persons who require them for the satisfaction of their wants. Hence arises the necessity of transferring those goods to widely scattered consumers or buyers. This passing of goods is now-a-days managed in most cases through the agency of wholesale merchants, retail dealers, bill-brokers, bankers and many other intermediaries. All these play their part, and sometimes an important part, in assisting the process of production. Thus exchange is a necessary link between production and consumption.

But it is not exchange alone which is necessary for production and consumption. Production is also essential for exchange. For, if nothing is produced, nothing is exchanged; if more is produced more is exchanged. The activity of exchange comes into play only with production. Thus production and exchange are inter-related.

§ 12. **Production and Distribution.**—The production of wealth is influenced by its distribution. If wealth were equally distributed, the difference between the rich and the poor would greatly diminish and with it would also decrease the production of luxuries which are consumed by the rich. Again, if inequalities in the wealth of different classes disappeared or at least were minimised, people would be better fed, clothed and housed. Their productive efficiency would be increased and therefore the total amount of wealth produced would also be increased. The parents would be able to give a better education and training to their children and thereby make them more efficient producers. In some cases, the working hours of the producers might also be reduced, without affecting the production of wealth.

Conversely, the distribution of wealth is also influenced by the amount of wealth produced. If a greater amount of it is produced, the question of distribution leads to all sorts of problems, e.g., who is entitled to the increased output, the landlord or the labourer or the capitalist or the organiser, and how much should go to each of the four agents, if all of them are entitled to it, etc., etc. More disastrous than probably the war itself are the strifes which sometimes result on account of the sharing of wealth among the various agents who co-operate to produce it. Hence distribution is a problem which is intimately connected with production. Thus production and distribution are inter-dependent.

§ 13. **Exchange and Distribution.**—Under modern industrial conditions, the distribution of wealth is affected by means of exchange. The share which goes to each agent of production represents the value which has been assigned to the service rendered by that agent in the production of wealth. That the value of each share is dependent upon the demand for and supply of the agent concerned, is evident from

the fact that if land is scarce, high rents must be paid and if labourers are many, wages will be low, and so on.

From another point of view, the exchange-value of a commodity depends upon the theory of distribution. For, the efficiency of each agent as a producer, upon which is based his share or the exchange-value of his service, depends upon the amount of the joint-product which he receives and this amount depends upon the principles followed in the matter of distribution.

Hence exchange and distribution are intimately related to each other. All this discussion makes it quite clear that the four departments of economics are so inter-dependent as they cannot be divorced from one another.

4. Relation of Economics to other Social Sciences.

Practical evonomic problems are seldom explained by economics alone. In order to understand them fully it is necessary to be acquainted with other sciences as well. Of these other sciences those in which man forms the central theme of study are more closely related to economics. Man may be studied from two different aspects: man as an individual, and man as a member of human society. The study of man as an individual forms the subject-matter of two sciences, Psychology and Physiology, while the study of man as a member of human society forms the subject-matter of **Sociology.** Here we are concerned with the study of relation of Economics to the latter group of sciences.

§ 14. **Economics and Sociology.**—Sociology deals with man's collective activities—activities which one man cannot very well carry on alone. It is the name given to that science which treats of ethical, political, legal and economic activities of man which cannot thrive in solitude. These activities have given

rise to separate social sciences, namely, ethics, politics, law (jurisprudence), and economics. The science of economics is, as it were, a single thread in a closely knit web of the wider and general science of sociology. These social sciences are so inextricably interwoven with one another that they cannot be studied in isolation from sister sciences. A brief account of the relation of economics to other social sciences will now be given.

§ 15. **Economics and Ethics.**—Ethics is the science of morality, of what is morally right and what is morally wrong. It deals with the *ideal*, with what *ought to be*. Economics is the science of scarcity, of how man behaves when his means are limited in relation to his ends. It deals with the *real*, with what *is*. Thus economics is a science distinct from ethics; but it cannot be studied apart from ethics, because both study man, the one in relation to wealth and the other in relation to morals. From the purely scientific standpoint the function of economics is not to pass ethical judgments; it has nothing to do with the questions, whether the consumption of liquors is morally justified or not, or whether the tools of the house-breaker are morally allowable or not. His only business is to see whether such articles are or can be the subject of exchange. From the practical standpoint no solution of a problem relating to human conduct can be regarded as complete until its ethical aspects have been considered. To meet the demands of justice and morality it is necessary to consider a practical economic problem from the ethical point of view also. For instance, it is essential to ask questions such as these: Is it right to charge for a thing a price which is above its cost price? Is it wrong if the seller conceals from the buyer any defect in his articles? Is it right to tax the people so highly as that? Is it wrong to impose high import duties on Japanese goods? The economist is not necessarily a

moralist, but there is the inner voice in every man, the voice of his conscience which urges him all the time to do what is right and to give up what is wrong. It is true that he is concerned with the actual facts of life and not with the ideal, but that does not mean that he should not consider the ideal in examining the real. On the basis of his investigations he can surely build rules that may take man nearer to the ideal.

It is often remarked that economics lays too much emphasis on the wealth-getting and wealth-using activities of man, that is, on the materialistic side of human life, and practically ignores the ethical side of it—the human character. Nobody can deny that the morals of the people have much to do with making a nation wealthy and prosperous, but it is also true that the character of a man is largely influenced by (1) the amount of his income, (2) by the nature of his occupation and (3) by the mode of his spending that income.

If a man's income is large, he is free at least from the anxiety of earning a livelihood for himself and his family. If it is large enough to relieve him of the worries for his household expenditure, he can find time for higher and nobler aspects of life. He can give attention to physical, mental and moral developments. A man with a large income is generally frank, honourable, generous and arrogant.

The means which a man adopts to earn his livelihood are always much concerned in building his character. Is not the character of a cultivator different from that of a clerk or a doctor? A cultivator is usually not as intelligent as a clerk but more hardy and painstaking than the latter. The difference is due to the difference in the nature of the occupations of the two. A peasant has to devote nearly the whole day to physical labour, while a clerk to mental effort. A clerk is busy all the year round. His habits, therefore, are more or less regular. A culti-

vator has enforced idleness during certain periods of the year and hence his habits are not so regular. A surgeon has to handle delicate instruments; naturally he is very careful and precise. A cultivator has to deal with rough tools; as a result of his association with them his habits are clumsy and coarse. The profession of a doctor demands punctuality and regard for the convenience of others. The profession of a clerk requires co-operation and discipline. Thus the formation of a man's character largely depends upon the nature of his occupation.

The influence on character of how a man spends his income practically needs no explanation. For if a man spends his income lavishly without any thought for the morrow, he evidently lacks foresight and can hardly be called wise. He is, on the other hand, self-indulgent and reckless. He sacrifices larger needs of the future for the immediate pleasures of the moment. If income is laid out with an eye to the future, he cannot but be praised for his forethought and self-mastery. If income is spent with due regard to the needs of dependents he deserves all credit for his unselfishness and generosity.

§ 16. **Economics and Politics.**—Politics is the science of governmental functions, methods and organisation. It deals with man in relation to wealth. The two sciences are related to each other because some human actions are concerned at the same time both with wealth as well as with government. Economics and politics overlap, for example, in matters of customs, taxes, and factory legislation. The business of the economist is to examine how governmental activity effects wealth, and the interest of the politician lies in knowing what economic result is likely to follow from this or that course of governmental action. One of the functions of politics is to device means by which to raise funds for the governmental activities which have become manifold now. If a tax

is to be imposed for this purpose, the politician has to discuss and analyse what kind of tax it should be, how it would affect industry and commerce, and how much revenue the state can expect from it. The increase in postal rates or in duty on salt are some of the problems of this nature. They fall within the jurisdictions of both economics and politics. Regulative departments also such as those which manage and supervise means of communication and transport are on the borderland of both the sciences. Thus economics occupies joint territory at places with politics.

§ 17. **Economics and Law (Jurisprudence).**— Economics is the science of the material side of human welfare. But material welfare is impossible without law and order. To promote economic prosperity of the people, the first and most obvious thing which the government must do is to make and enforce law with a view to create a state of peace and confidence. Nothing else so discourages industry and enterprise as uncertainty and insecurity of person and property. A country can never have prosperity, if its people are robbed of the reward for their labour and are, through discouragement, hampered in further production. When a man does not feel sure of enjoying the full advantage of his own industry, enterprise and foresight, he has no incentive for exercising these virtues to the full. There can be no form of waste worse than that which results in the loss of the productive energy of the people. Hence the specific aim should be to establish and promote all the conditions that contribute to the highest economy. If there are persons who have no moral or legal restraints, who kill, maim, injure, rob or deceive, they must be held in check and punished in order to make them respect law and justice. Industrial freedom should not be allowed to go too far; competition can have its own way only so long as the strong do not

prey upon the weak and the ferocious upon the gentle to defeat the object of production by unproductive methods. In fact, competition ought to be an instrument for making industrial success depend upon production. Furthermore, to infuse confidence in the people to economise time and energy, the government ought to standardise coins, weights and measures, and frame suitable laws to punish the counterfeiters. That is at least what the organised government or society is expected to do for the economic welfare of the people.

All this leaves little doubt for the reader to admit that law is essential on economic grounds. It, in fact, lays the framework for the prosperity of masses, and the prosperity of masses is what the science of economics deals with. Hence economics and law are dependent upon and inter-related to each other. Law is as much necessary for economic well-being as economic well-being for the enforcement of law and establishment of order.

Besides these social sciences, there are two more, **History** and **Geography** which also devote themselves to the study of man in one aspect or another, and, for that reason, bear close relationship to the science of economics.

§ 18. **Economics and History.**—There are two kinds of histories: (1) History of economic facts, usually known as economic history, and (2) History of economic ideas, which may be called history of economics.

Economic history is a record of past economic facts. It helps the economist to interpret the present with a knowledge of the past. For example, in working out the general theory of modern banking, it is helpful to look to the past history of banking—the original object of banks, their functions and modifications introduced in them from time to time with reasons therefor and consequences thereof, etc., etc.

The history of famines in India or any other country may help a good deal in establishing causal relations between price, supply and demand for grain. The influence of law and custom on price, wage, and rent may likewise be traced. The effect on wages of an epidemic of a virulent type such as the influenza of 1918 may well be ascribed to the sudden diminution in the supply of labour. But this is not the only function of economic history. Far more important than this is its function of criticism, of bringing mistakes to light. It was believed, for example, that the wages of labourers were determined entirely by the standard of living which did not affect them. As a matter of fact this was later found to be incorrect on the basis of historical evidence. Similarly, the Malthusian theory of population has been attacked for want of historical support in respect of many points stated in it. There are certain phenomena, however, whose validity cannot be established without reference to the past. The occurrence of credit cycles, the effects on trade and industry of the discovery of gold mines or of the scarcity of gold, the working of a system of progressive taxation, the effects of machinery on wages, and many other problems of a similar character need historical material for their analysis and confirmation.

History of economic ideas is a record of the historical succession of economic theories. Many modern theories in economics have their roots in the past. The history of their origin and development greatly assist the economist to analyse and understand them. In all departments of human action, facts and ideas act and re-act upon one another. Hence economic theories must be studied in relation to the economic facts that helped to produce them, and also in relation to those economic facts which the theories themselves helped to produce. Social institutions and the force of public opinion about them are powerful

factors that sometimes determine the course of economic development. If it were considered, for example, that the taking of interest from the cultivators was immoral because they approached the moneylenders only in circumstances of misfortune, the economic development would proceed on altogether different lines. It cannot also be denied, however, that many social and economic institutions of today are the direct outcome of the progress of our thought regarding the phenomenon of wealth. For example, some are of opinion that the caste-system among the Hindus was originally due to the fact that this sort of division of labour was indispensable for the prosperity of the masses in those days of struggle and disorder. The present banking institutions stand for the purpose of promoting the production of wealth and with it the prosperity of the people.

Thus we see that economic and history assist and control one another in various ways. A knowledge of economic theory serves the historian to understand what kind of historical data is likely to have an important econmic bearing. To the economist it is necessary that he should have a clear grasp of the main facts of economic history if he wants to understand economic theories properly.

§19. **Economics and Geography.**—Man cannot be scientifically studied apart from the ground which he tills, or the lands over which he travels, or the seas over which he trades. It would be impossible to conceive of any of his activities apart from the distribution of the great features of the globe, the inevitable theatre of progressive human activity. The surface of the earth with its manifold features of mountain and tableland, plain and desert, ocean and lake and river, forest and prairies, continents and islands, air and rain and sunshine in all their complicated combinations constitute his immediate environment which influences his activities in all direc-

tions. It not only decides his actions and movements but also determines the course of the growth of industry and the development of commerce. The differences in appearance, dress. habits, manners, modes of living, physique, ideas, occupation and culture are largely the outcome of the influence of geographical conditions on man, and of man's action in modifying them.

There is thus an intimate relation between man and his geographical surroundings. A study of this relation forms the subject-matter of modern geography whose business is to explain how position, relief, climate, soils and vegetation cause differences between different regions, and how these differences give rise to differences of products, of opportunities, of types of man, and of distribution of man. Man is the central theme of modern geography. He is the converging point of the science of economics also. Hence the close relationship between geography and economics. One studies the activities of man in relation to his natural environment; the other studies the activities of man in relation to wealth.

EXERCISES

1. If you were to give an idea of Economics to your friend who has just passed his High School Examination, how would you set about it?

2. Discuss the subject-matter of Economics. How far is it true to say that Economics is the science of wealth?

3. Define wealth and classify it, giving suitable illustrations in each case.

4. What use is the study of Economics to social reformers, statesmen, traders, and workmen? How does it help the students?

5. What are the principal divisions into which the subject-matter of Economics is usually divided? Bring out their relation as clearly as you can.

6. Bring out the relation between Consumption and

Production. How far do you agree with the following statement?

> "It is not consumption that guides and controls production but production that determines what men shall consume and how much they shall consume."

7. What is the subject-matter of Economics? How is Economics related to other social sciences?

8. To what extent is Economics related to Ethics and Politics? Are they so wedded that they cannot be divorced one from the other?

9. "Economics without Economic History has no root and Economic History without Economics has no fruit." Discuss.

10. Discuss with examples the relation between (a) consumption and distribution, (b) economics and politics, (c) economics and psychology.

Acc. No: 1119

GOVT. GIRLS COLLEGE
SIKAR
LIBRARY

CONSUMPTION

CONSUMPTION

CHAPTER I

THE FOUNDATIONS

§ 1. **Consumption as a Department of Economics.**—In this department of Economics will be studied the wants and their satisfaction: how the wants arise, what are their characteristics, how they are satisfied, the laws governing their satisfaction, and other allied topics. As wants can only be satisfied with the help of wealth, the study of consumption will consist in the discussion of those activities of human beings that they undertake in spending wealth in order to satisfy their wants.

§ 2. **Importance of Consumption.**—The older economists did not fully realize that it is through consumption that wealth leads to welfare; that consumption deals with wants which are the motive force of all economic activity; that wants are the beginning and the end of human efforts. It is only in recent years that the great importance of the study of consumption has been recognized and precedence is given to it over the study of production and other departments of economics. But before we begin the study of this department, it is necessary to acquaint ourselves with the particular meanings of a few familiar terms which have been borrowed from everyday speech.

§ 3. **Satisfaction.**—From the economist's point of view, a thing is said to give satisfaction when it yields pleasure or wards off pain. Dinner which saves us from the pain of hunger and gives us the pleasure of eating good things, gives satisfaction. All of us feel satisfaction if we are able to sit down when we want, or if we are able to go out when we like. A

dentist in the act of taking out a tooth causes us pain, but we have the satisfaction of knowing that toothache would not trouble us anymore.

§ 4. **Consumption.**—This term, as distinct from the department of consumption, in economics, is equivalent to the word 'use.' When the use of a thing leads to *direct satisfaction* it is said to be consumed. A thirsty man consumes water when he drinks it to quench his thirst; a hat is consumed when it is put on to keep off the sun. Books, magazines or newspapers are in the process of consumption when we read them; so are the houses in which we live; and the pictures that hang on our walls. This sort of consumption is sometimes called final consumption because the things are being used for the final purpose for which they are meant that is giving us direct satisfaction. According to this definition of consumption, goods directly consumed are called *consumer's goods*. But when the satisfaction derived from the consumption of a thing is indirect, not direct, the consumption is known as *productive* consumption, and the things consumed are termed *producer's goods*. For instance, when coal is burnt to supply warmth to a person, it yields direct satisfaction to him and is, therefore, in the process of final consumption; then it is a *consumer's goods*. But when it is used in a furnace of a blacksmith melting iron, it yields only indirect satisfaction and consequently is in the process of productive consumption; in that case it is a *producer's goods*.

§ 5. **Utility.**—It is the capacity of a thing to afford satisfaction to its consumer. A kite has utility for the boy who is flying it. A dose of quinine, though bitter to taste, has utility for the patient of malarial fever.

Usefulness should be distinguished from utility. An article may be injurious to health and yet it may have utility for those who are in the habit of using it, such as opium for opium-eaters. Again, even if a

thing is morally undesirable, it may possess utility to a person for the simple reason that it gives him satisfaction. Wine, for example, has utility for the drunkard. So long as things are desired they have utility. Swords and guns of dacoits and tools of a house-breaker may be harmful for the safety of person and property, but they do have utility to the owners who desire them because they can make use of them to their advantage.

Thus utility is a relative attribute, not an inborn characteristic of things but possessed by them when they are serving some human purpose or satisfying human wants, irrespective of the fact whether the wants are morally justified or whether someone else is harmed by them.

§ 6. **Consumption and Utility.**—To consume a thing is to derive utilities from it and therefore consumption will mean the *utilization of wealth for the satisfaction of human wants*. When a thing is being consumed it is losing its utilities. In some cases the entire utility or want-satisfying power of a commodity is exhausted at once, as happens when coal is burnt or bread is eaten; while in other cases the utility is given out gradually over a long time, as when a chair or a fountain-pen is being used. Both these cases furnish examples of consumption.

Consumption of wealth is different from the destruction of wealth. Wealth or its utilities can be destroyed by fire or earthquake or water as when a house is burnt to ashes or crumbles to ruins, or by wanton human destruction like bombing and dynamiting. But such acts of destruction are not acts of consumption. Again, time is a great destroyer; it destroys everything in its course and destroys a thing faster when it is not being consumed by human beings. An untenanted house will be destroyed much more quickly than when it is being lived in.

In a few cases, however, the utility of a thing is increased as its consumption proceeds though only

temporarily. The new nib of a pen, for instance, becomes set and more serviceable after it has been used for a few days, and a pair of shoes give a better fit after its wear for some time. But ultimately their utilities are bound to be exhausted.

1. Some Important Attributes of Utility

§ 7. **Utility goes with human desire.**—Utility is not an inherent quality of the things but is possessed by them in relation to human desires. Things acquire utility only if they are the objects of these desires. Water has utility, not because it is water, but because it is desired by the people. No matter how strong and attractive a thing is, it will have no utility, unless it is capable of serving a human purpose or satisfying a human desire. 'As a shadow follows a butterfly from one flower to another, so utility accompanies desire and abides only where desire rests.'

§ 8. **Utility differs with different uses.**—Almost everythintg can be put to uses more than one. To take the simplest case, water can be used in a variety of ways. A cup of water may have no utility to a man who is not thirsty; but it may have much utility to the same man if he needs it for a shave. In the same way, a copy of the "Leader" may not have utility as a newspaper, but may have great utility as a means of lighting a fire. A piece of barren land has no utility for agricultural purposes, while the same piece may possess great utility for building and other purposes.

§ 9. **Utility increases with the growth of knowledge.**—Man's power of observation with the aid of trained intellect and vision is developing and his capacity to put a thing to several uses is increasing. Copper did not possess as much utility before the invention of electricity as it does now due to its use in making transmission wires and generators. Rags

acquired more utility when it was discovered that they could be used for making high-class paper.

§ 10. **Utility is altered with an alteration in form.**—Clay turned into bricks, pots or toys, is endowed with more utility, while a metal jar loses its utility when its shape is distorted. Wood changed into doors, and cloth made into shirt acquire greater utility as in these new forms they serve human purpose better.

§ 11. **Utility varies with a change in time.**—Warm clothes which have great utility in winter do not have as much utility in summer. Food may have little utitity when the stomach is full, and much utility when it is empty. As the consumption of an article destroys its utility slowly or quickly, our object must be to consume that article when it is most useful. People store rice in order to consume it after two or three years when it becomes more tasteful.

§ 12. **A change in place leads to a change in utility.**—Grass in a forest where it will hardly serve any purpose has less utility than when it is brought into some neighbouring village or city where people need it to feed their cattle. Water in regions where droughts are frequent has more utility than in flooded areas.

§ 13. **A change in ownership brings about a change in utility.**—A pair of sun goggles or an album of pictures with a blind boy has evidently no utility but it will come to possess a high degree of utility if transferred to a person able to see things.

2. Measurement of Utility

A thing has more utility to the consumer if it gives him more satisfaction, and less utility if it gives him less satisfaction. To illustrate, a boy may get more pleasure from an anna worth of sweets than from an anna worth of kites. These psychological

facts of satisfaction and pleasure can be expressed numerically also by means of arithmetical numbers chosen arbitrarily. We may say, for instance, that to the boy an anna worth of sweets yield satisfaction which is equal to 20 and an anna worth of kites yield satisfaction which is equal to 15, a number less than 20. Figures 20 and 15 serve the purpose of showing at least that sweets give more pleasure to the boy than the kites. They also express the proportion in which the two satisfactions stand and it is here that the assignment of numbers in the interest of accurate measurement should be carried out as carefully as possible. 20 is to 15 as 4 is to 3 or 1 is to $\frac{3}{4}$. This means that the kites yield only three-fourths of the satisfaction afforded by the sweets. If that is a fact in the case of the boy, numbers 20 and 15 are quite correctly chosen, otherwise not. The same fact can also be borne out by other pairs of numbers such as 40, 30; 36, 27; and 8, 6. It does not matter which pair we choose so long as it brings out the two facts that the sweets give more satisfaction than the kites and that the satisfactions stand in the ratio of 4: 3. The arithmetical numbers which express satisfactions are spoken of as units or degrees of utility.

Utility is sometimes expressed in terms of money also. For example, we might say that the satisfaction which an anna worth of sweets, brings to the boy is as much as would be derived by him on spending 4 annas on things other than sweets, while the satisfaction which he gets from an anna worth of kites is equal to that which he would obtain by spending three annas on things other than kites. To the readers, a single copy of the newspaper is worth many more annas on account of the information they receive than an anna which probably they pay for it.

Like a thermometer used to measure the temperature of two bodies, which we can compare, there is no such instrument yet discovered for recording the

utilities obtained by two consumers from the consumption of a commodity for the purpose of comparison. There is no bridge to connect the utility enjoyed by one person with the utility enjoyed by another. For instance, if *A* takes an orange and gets 20 units of satisfaction from it and *B* takes another similar orange thereby getting 15 units of satisfacion, we cannot say on the basis of this kind of measurement that *A* gets more utility than *B* from the consumptions of an orange and that *B's* satisfaction is $\frac{3}{4}$ths of *A's*. The measurement of satisfaction by the two individuals might have been on different lines, so that the two numbers are not comparable. If, however, *A* or *B* alone had taken both the oranges one after the other, the units of satisfaction thus obtained would have been comparable.

EXERCISES

1. Define Consumption. Which of its following definitions is more acceptable and why?

   (i) Consumption is not merely the act of eating; it, in fact, covers the best possible use of the wealth that is available.

   (ii) Consumption means the use of goods in the satisfaction of human wants.

2. Consumption is regarded by some as the goal of economic activity and by others as a means of restoring energy. Which view in your opinion is correct? Give reasons.

3. Name the different types of consumption and give appropriate examples. Take the examples of a building, a bullock-cart and a certain quantity of rice to show how consumer's goods differ from producer's goods.

4. Comment upon the following statements:—

   (i) Consumption of anything simply means the destruction of its utility.

   (ii) Utility arises only with desire and vanishes with the extinction of desire.

5. Consider whether the following possess utility:—

(a) A ten-rupee note with a thirsty man in the desert of Rajputana.

(b) An old and dry cow.

(c) A razor-blade in the possession of a pick-pocket.

(d) A copy of this book with a playful boy.

6. How is it possible for the utility of a thing to a person to vary? Name all the circumstances with exceptions, if any, in which it is possible.

7. How can you measure the utility of a thing? Is it correct to say that a thing costing only an anna is worth four annas?

CHAPTER II

HUMAN WANTS

§ 1. **Wants.**—Though desire and want are commonly treated as synonyms, they are different in economic sense. Want is an effective desire, desire which calls forth an economic effort for its satisfaction. There is no want, economically speaking, in the hungry eyes of a pennyless boy looking at tempting hot *puris* in a *halwai's* shop. The slakeless desire of a miser for glittering coins only to please his eyes is not an effective desire. For a desire to be effective it is essential to have the *necessary means* and also the *willingness to part* with these means for the sake of the desired thing.

Wants may be *single* or *composite*. When only one thing is the object of a person's effective desire, his want is a single want, but when a want is made up of two or more single wants it is a composite want. Want for rice is a single want while that for a meal (consisting of several articles of food) is a composite want.

§ 2. **Wants and Activities.**—Wants are the motor force that sets all economic activity agoing. If man had no wants to satisfy, what for would he work? Why would the cultivator toil, the fishermen fish, the coachmen drive, the coolies labour and the masons build? Why would the artisans, the shopkeepers, the doctors, the lawyers, and so many other people plunge themselves every day into feverish activity like bees in a hive? Men without wants would be just like statues wanting nothing and doing nothing; the whole structure of economic activity would then crumble down and vanish like a dream. It is human wants, therefore, that provide the motive for work and lend impetus to continue it.

But every effort that is made to satisfy a want not only brings about its satisfaction but also gives rise to wants which were not felt before. New wants arise either because the old ones do not yield as much satisfaction as they did before or because the element of variety is introduced in them. It is a matter of common experience that one gets fed up sooner or later with the same sort of food—*dal*, for example, consumed day after day—and begins to feel the necessity for a change. The new article which takes the place of *dal* gives greater pleasure and sets the consumer to work harder in order that he may not be deprived of it. Later, when he has sufficient food to eat, he begins to notice differences in its quality and in order to improve it further begins to experience the want for all sorts of seasonings and flavours. Likewise, a single cloth becomes differentiated into several kinds of clothes, cut in different shapes to suit the different parts of the body. These new wants breed new activities undertaken with greater vigour and interest to secure their satisfaction. The new activities again cause new wants to appear, and thus the *endless chain of wants and activities* continues for ever.

It may be noticed that even during the process of satisfying a want, new wants are created. The want for food leads a man to work to secure the required articles and at the same time creates new wants for cooking apparatus and also the art of cooking. The want for a table does not only urge a man to work but the process of making it gives rise to wants for the raw materials and tools of a carpenter.

Hard work done for the satisfaction of wants becomes monotonous and tiring after some time and consequenly creates in the worker a desire for distraction or recreation. Hence arise wants for sports and shows of various kinds. Moreover, with work comes the desire to excel or improve; this leads to wants for better tools and higher skill in using them.

travelling freely and the articles also will have the facility to move far and wide; this will naturally lead to an increase in the number of wants. And as knowledge advances and scientific researches are brought to aid man in his work, his wants are bound to grow more numerous and more varied. Our children and grandchildren will surely have many more wants than we have, and *it is not likely that economic progress will ever lead to a condition in which all human wants are completely satisfied.*

§ 5. **Wants taken singly are satiable.**—Wants in general are insatiable, but if any one want is singled out, it can be satisfied, at least for the time being. From our commonest experience of life we know that howsoever thirsty a man may be, there is a limit beyond which he cannot possibly drink; howsoever hungry he may be, he cannot eat more than what his stomach has the capacity to hold; howsoever interesting a novel may be, it is bound to pall on the reader if its reading is unduly prolonged. In short, the larger is the quantity or the longer the duration of any means of enjoyment, the sooner are we fed up with it, because after all the capacity of a man to consume a thing or things at a particular time is limited. The limit may be reached sooner in one case and later in another but the fact remains that unless a person desires to possess a thing for the sake of mere possession, his want for it is capable of being satisfied at least for the time being. *This characteristic is the basis of an important law known as the Law of Diminishing Utility.*

§ 6. **Wants for rival commodities are competitive.**—If a commodity satisfies a want in much the same way as another, they are said to be rival commodities. They are also called substitutes as one can be used in place of the other. A cup of tea or milk or a glass of sherbet serves the purpose of quenching thirst in practically the same manner; each of these, therefore, is a rival commodity to the others. They

present themselves before a man's mind as soon as he wants a drink, and the want for every one of them tries to go ahead of others. If they yield the same amount of satisfaction to him, the cheapest of them gets preference and the other two lag behind in the competition that ensues between them. On the other hand, if they are had for the same money, that one is preferred which yields the greatest amount of satisfaction. There are many such commodities which man consumes today that are capable of being replaced to some extent by others and wants for them compete with one another. Out of them that commodity is ultimately chosen which pleases the palate best and also suits the pocket of the consumer most, or gives highest satisfaction at lowest cost.

On the competitive character of human wants is based another important law, called the Law of Substitution or of Equi-marginal Utility.

§ 7. **Wants for allied commodities are complementary.**—Commodities which go together in groups or pairs to satisfy a human want are known as allied commodities. Fountain-pen and ink, motor-car and petrol are instances of allied commodities. A fountain-pen without ink is as useless to a consumer as a motor-car without petrol. To serve the purpose for which it is meant, the pen must be accompanied by ink and the car by petrol. The wants for the pen and the car must always arise before those for ink and petrol; they are original or *basic wants*. The wants for ink and petrol which go only to complete the basic wants for pen and car are *complementary wants*. Hence it must be remembered that wants for allied commodities are complementary not to one another but to basic wants alone. A carriage and a horse are commodities allied to one another, but wants for them are not complementary to one another. Here the want for the carriage is basic and consequently the want for the horse is complementary to it. The want for a horse

is basic when it goes along with that for a saddle. It would be a mistake to say that the want for a carriage is complementary to the want for a horse. In a few cases, however, the converse may also be found to be true. Thus the want for one boot is complementary to the want for the other of the pair and *vice versa*.

§ 8. **Wants tend to become a matter of habit.**—When an article continues to enter into the consumption of an individual for a long time, he becomes used to it so much so that he cannot do without it. Students, who start smoking cigarettes or using spectacles merely for the sake of fashion in the beginning, are seen later to have acquired the perpetual habit of those things and wants for them have become, so to say, their second nature. Similarly, the want for a bicycle becomes a matter of habit with those who are so much accustomed to ride it for short or long distances that they would acutely feel its absence if they do not get it whenever they want to go about.

This characteristic of wants is important inasmuch as it determines the standard of living of an individual and consequently his income.

2. Classification of Wants

Wants are classified into (i) Necessaries, (ii) Comforts, and (iii) Luxuries.

§ 9. **Necessaries.**—There are three kinds of necessaries: (i) Necessaries for life, (ii) Necessaries for efficiency, and (iii) Conventional necessaries.

Necessaries for life.—Wants whose satisfaction is essential for the existence of human life constitute the necessaries for life. Every person requires certain quantity of food, articles of dress and shelter for the maintenance of his health and vigour and in their absence he is likely to impair his health and even endanger his life. Wants for them are undoubtedly more urgent than those for his other requirements. They are the most urgent of human wants as without

them life would be impossible. Thus the wants for that *minimum quantity* of food, clothes and shelter, which is indispensable for holding body and soul together are called absolute or bare necessaries for life.

These necessaries for life differ from climate to climate. In a hot country like India where people need practically little or no amount of clothing and shelter, the necessaries for life mostly consist of wants for a small amount of grain and water; while in a cold country like England they include wants for more and warmer clothing and shelter besides a certain amount of richer food and drink.

Necessaries for efficiency.—Over and above the bare necessaries for life there are wants whose gratification is necessary for the purpose of maintaining one's efficiency as an earner of his living. Some extra and possibly better food to keep his vigour and energy at a high level, warm clothes to protect him from chill and cold, and a clean and commodious house with healthy surroundings are those requirements of a man's life which make him fit to do his work. Wants for all those things are necessaries for efficiency. To this list may also be added wants such as those concerned with provision for sickness and old age and with opportunities for medical treatment and training to children carried upto that stage at least which the labourer himself has reached.

Conventional necessaries.—To this class of necessaries belong all those wants which a man has to meet in order that his prestige in society may be maintained. Living as a member of society, he is compelled to incur expenditure on wants which are dictated by social convention. It is regarded, for instance, as a necessary formality to offer a *pan* or a smoke to a visitor, and expenditure on this item has to be made willingly or unwillingly for the fear of social indignity. In ceremonies connected with marriage, birth and death, friends and relatives have to be invited and entertained

in accordance with the prescribed form, because the expenses go to build up one's respectability in the estimation of the particular section of society to which he belongs.

On the people of this country the hold of custom and tradition is so strong that they would lead a miserable life rather than transgress old rites and rituals and stand low in the public eye ; therefore conventional necessaries exercise a great influence over our countrymen. More often than not, the conventional necessaries are oppressive specially to the poor, but the sensibility to prestige of an individual at times overpowers him so much so that he is driven to curtail even some of his primary wants for its sake.

Necessaries, therefore, is a wide term; it includes wants necessary for human existence, for working efficiency, and for social prestige. The first type is imposed upon a man by his *physical constitution and climatic environments*. The second type is determined chiefly by *reason*. Man, being a creature more of impulse than of reason, is very often led away by glowing advertisements, or attractiveness of things, and would seldom reason out to go in for durable ones. For this weakness of human nature, he has to suffer as a comparatively poor producer. The third type is due to his *habit* of consumption or to the established *custom* of the society. The pressing force of public opinion or the lurking fear of losing dignity in the public eye renders it necessary to spend on caste dinners, funeral ceremonies, religious observances and the like. It is not difficult to find students who are in the habit of visiting a cinema at every change of programme and for its sake stint some of their more urgent wants like that for books and stationery. Again, it is not uncommon to come across factory labourers who would stint themselves in the matter of food rather than forego their customary indulgence in *pan* and tobacco or liquors.

§ 10. **Comforts.**—Comforts are wants which lead to a fuller and more decent life of those who possess them. They introduce wholesomeness in life and create better chances for greater enjoyment. In their absence, a man will neither perish, nor lose his efficiency as a producer, nor be subjected to social indignity, but they can hardly be dispensed with in a society where life is really worth living. No one, however poor, confines himself to necessaries; part of his expenditure goes for comforts as well. On the plains of Northern India, a pair of shoes to a poor peasant in cold weather would be a great comfort, though not a necessity. A decent dwelling house with a little furniture in it could hardly be considered necessary for a low-paid clerk, and yet it would mean a great comfort to him. Whether a want is a comfort to a consumer or not depends upon his occupation, income and social status. The want for even brown sugar would be regarded as a comfort in the case of an ordinary cultivator; not so, however, in the case of a patwari or a zamindar.

§ 11. **Luxuries.**—Luxuries are wants meant for individual indulgence; they only serve the purpose of excessive variety or show or ultra-fashion. In some cases they actually lead to a loss of efficiency resulting in poorer, meaner and more miserable life. They are inessential. Expenditure on them is generally believed to be unwise. Wants for costly food, magnificent buildings and expensive motor-cars are only extravagant luxuries to most of the people and if the expenditure incurred on them is in excess of what a man's income allows, it is certainly not justifiable. To know whether a man's want is a luxury it is necessary to find out how well-off he is and what particular section of society he belongs to.

§ 12. **Necessaries, Comforts and Luxuries are relative terms.**—All forms of necessaries, comforts and luxuries should be understood in relation to man, place, time, income, price of the commodity, and its quantity

consumed. To different consumers the same commodity may be a necessary, or a comfort, or a luxury at one and the same time. A bicycle is a necessity to a student who will otherwise have to walk to his institution three or four miles each way; a comfort to another student who lives quite close to his institution but has to attend compulsory games every evening; and a luxury to a third student who resides in the hostel adjacent to the college building.

Again, the same commodity may be a necessity, a comfort and a luxury to the same individual at different places. An woollen over-coat may be a necessity to a man in England, a comfort to him on the Indian Ocean, and a luxury to him in Bombay even in the winter season. Similar is the effect of the change in time and circumstances. An umbrella is a necessity to a man in the rainy season, a comfort to him in the summer, and a luxury to him in the winter. The use of fountain-pens among students has been steadily growing so that while once they were regarded as an article of luxury they are comforts today and the time is not far off when they will become necessaries.

With a rise in the earning power of a person, an article of luxury may become a comfort or even a necessity to him. To a mistri or fitter in a mill, a car is obviously a luxury; but if he earns promotions and in course of time becomes an engineer, the car becomes a comfort to him. Later, if he starts his own business on a big scale and has to move about to supervise its different branches, the car may become a necessity.

The greater the frequency of an article entering into the consumption of an individual, the stronger are the chances of its consumption growing into a habit with him. Cheaper articles possess this tendency in a greater degree than the dearer ones. If the price of a commodity is low, it is consumed more often with the result that sooner or later it becomes a necessity to the consumer. On the other hand, if the price of a

commodity is high, its consumption is restricted and it is regarded as an article of luxury more or less. When the season of tomatoes starts, they sell at a high price and their consumption is confined usually to the small class of rich people who use them only sparingly. For a few days they are a luxury even to the rich. But as their price goes down, they enter more and more into their consumption and should be treated as comforts. Ultimately, when their price gets lower still, they become an article of necessity, that is to say, an article of daily and unrestricted consumption.

A change in the numerical strength of an article of consumption changes it from being a necessity to a comfort or a luxury. A shirt of long cloth is surely a necessity to a student; six shirts which provide him necessary margin for wash and change constitute a comfort; and a score of them a luxury beyond any doubt. ...

All this makes it abundantly clear that the grouping of commodities into necessaries, comforts and luxuries is a purely relative matter and cannot be carried out once for all so as to hold good under all conceivable circumstances.

3. Tests in the Classification of Wants

The classification of wants into necessaries, comforts and luxuries is based on the following three tests:—

1. The test of efficiency.
2. The test of expenditure and utility.
3. The test of elasticity.

§ 13. **Basis of efficiency.**—It is the most satisfactory basis of their classification. According to this test those wants whose satisfaction leads to a considerable increase in the efficiency of the consumer and whose non-satisfaction will considerably reduce

the efficiency or may even endanger life, are grouped as necessaries. (This argument is applicable to the necessaries of life and efficiency but not to the conventional necessaries as these are treated on par with the luxuries.) Comforts are those wants which, if satisfied, add to the efficiency of the consumer by small increments only and, if they remain unsatisfied, the productive efficiency remains incompletely developed. Luxuries are those wants that do not add at all to the consumer's efficiency; they may even decrease it; but if they are not satisfied there is no loss to his efficiency which may, on the other hand, increase.

Of the three commodities milk, tea and wine, for example, as milk builds the health and increases a labourer's efficiency but its absence will decrease it considerably, it is an article of necessity for him. Because tea serves as a temporary stimulant, refreshes him for the time being and thus induces him to put forth more strenuous effort, it is a comfort for him. In the absence of the ' cup that cheers ' he will feel fatigued and less inclined to hard work. Wine, of course, is a luxury to him as most probably it will undermine his health and efficiency and without its consumption he will certainly continue a more efficient worker.

This basis of classification allows us to recognize the first few drops of wine as necessity, a little more of it as a comfort, and still more of it as a luxury to an industrious labourer.

§ 14. **Basis of expenditure and utility.**—The utility derived from the consumption of necessities is far in excess of the money spent on them as, though the necessities are the most urgent of wants, luckily they cost proportionately the least. The utility of a loaf of bread is almost limitless but it can be had for only an anna.

Money spent on comforts brings in utility at least proportionate to the expenditure, if not more, *i.e.*,

money spent on comforts is well spent. But the expenditure on luxuries yields only a temporary pleasure, not like the solid and real satisfaction yielded by the necessities and comforts. It is doubtful if luxuries give satisfaction worth the money spent on them. With the expenditure on necessaries and comforts this feeling of wastefulness is never associated. It is easy to compare the quantity and nature of the utility of an anna spent upon a loaf of bread, or a cup of tea or a sip of wine to see wherein the danger of waste lies.

§ 15. **Basis of elasticity or variation in consumption.**—The quantity of necessaries consumed remains more or less the same even if they become dearer or cheaper in the market. These are the most indispensable wants and consequently generally consumed in quantities adequate for the maintenance of health and efficiency. In case of the rise in the price some economy will be made but great reduction is inadvisable as it will injure health and efficiency. A fall in price will not result in any increase in their consumption as the quantity already being consumed is almost equal to the consumer's requirements. Quantity of rice consumed by a labourer will not vary much due to changes in its price.

But because luxuries are superfluous and meant for self-indulgence, their consumption can safely be curtailed without causing any pain to the consumer if their price rises. Similarly, in case of their becoming cheaper people will increase their consumption as no limit can be set to the extent to which they can be used for show and display.

Comforts occupy an intermediate position and with a change in their price the quantity consumed varies reasonably and proportionately. As their consupmtion adds to the efficiency and non-consumption causes pain, their consumption is liable to vary moderately due to changes in price.

EXERCISES

1. What is meant by an 'effective desire' and how does it differ from an ordinary desire? Is there no difference in the nature of a man's lust for power, a miser's thirst for money, my want for dress and your want for a coat?

2. "In the earliest stage of man's development it is his wants that give rise to activities; later the development of new activities gives rise to new wants." Explain and illustrate your answer.

3. Discuss the chief characteristics of wants and show how they are of basic importance in the study of Economics.

4. "If we were to cut down our wants to the barest necessities of life, we must read backwards the whole recent history of economic progress." Do you agree with it? Are the Indian Sadhus and Fakirs backward and uncivilized?

5. Comment on:

   (1) Wants are the beginning and the end of all economic activity.

   (2) Our recurring wants are as insatiable as our wants in general.

6. Distinguish between necessaries, comforts and luxuries. Is 'comfort' the same thing as 'necessity for efficiency', or 'luxury' the same thing as 'conventional necessary'? Point out the significance of this distinction.

7. What are the tests you would apply in classifying wants into necessaries, comforts and luxuries? Make a list of the expenditure you would discourage in the case of a common peasant, and a coolie found in that part of the country from which you come. State your reasons for doing so.

8. Name the wants of an Indian labourer and a college student that are determined by (a) habit, (b) custom, (c) fashion, (d) reason. How are they related with the standard of living which each of them has?

9. "The same commodity may be either a luxury, a comfort or a necessity." How? Give examples. Is it wrong to say that wheat is a necessity and car a luxury?

CHAPTER III

GRATIFICATION OF WANTS

§ 1. **Law of Diminishing Utility.**—Every single want is capable of being satisfied sooner or later. Take the consumption of water. To a thirsty man, the first cup of water would be indispensable and must give unthinkable pleasure to him; the second cup coming at a time when his thirst is less intense would not give him as much pleasure as the first one, but would still be highly agreeable; the third cup would not be as urgently required as the second, because by the time of its turn much of the intensity of thirst must have disappeared; and so on. The drinking would be continued until at last the intensity of thirst has completely died out, and pleasure brought down to the point where the man would cry 'Enough! now no more of water.' The thirst being quenched, he is fully satisfied for the moment. Each fall in the intensity of thirst is attended with a corresponding fall in the amount of satisfaction got from each successive cup of water. In short as more and more of water is consumed in a given period of time, less and less of satisfaction is obtained from it as a result thereof. Diminution in utility with every additional quantity of water taken must result, whether the consumer is at the source of a spring or by the side of a well or in his house, whether he drinks it in the morning or in the afternoon or in the evening, whether A (Ahmad) drinks it or B (Bankey) drinks it or C (Charles) drinks it. Also, what is true for water is true for every other commodity. The tendency of diminishing utility must manifest itself sooner or later, no matter whoever consumes, whatever he consumes, wherever and whenever it is consumed, provided that the consumption takes place within a given period of time. This common

experience of mankind points to an important law of consumption known as the Law of Diminishing Utility.

The Law expressed numerically.—The facts of the law may be put in figures for the sake of greater clarity of thought. When a man is so thirsty that water is a matter of life and death, the utility of the first cup of water is infinitely great to him and therefore can be expressed only by infinity. After having drunk this cup, his thirst is assuaged; consequently, the second cup of water is not as much enjoyed by him as the first one so that the utility derived from this cup is much less than the utility derived from the previous cup. Suppose the utility obtained from the second cup is represented by 100 units of satisfaction. The third cup which is taken when the intensity of thirst is reduced all the more, yields satisfaction less than 100 units. If the utility from this cup of water is nearly three-fourths of the utility from the second cup of water, it is represented by satisfaction near about 75 units; suppose it is 70 units. The utility obtained from each additional cup of water may thus be epxressed in numbers. Similarly, suitable figures may be assigned for the satisfactions derived from the consumption of other commodities.

§ 2. **Assumptions in the Law.**—1. *The units of consumption should be identical.* The tendency to diminishing utility shows itself when we assume that all the units of the commodity which is being consumed are equal in quantity and also in quality. For, if the second sip of water pulled a larger quantity than the first sip of water, or, if the second sip were taken from the cup containing iced water and the first from the cup containing tepid water, although each draught brought only one chhatak of water, the satisfaction from the second would naturally be greater than from the first. If this happened, it would not be in agreement with the Law. Hence for the Law to hold good, all units of consumption must be identical.

2. *The period during which consumption lasts should be continuous.* Identical units of consumption yield diminishing utility, if they are taken in quick succession but if a considerable interval were allowed to lapse between the first and the second units of consumption, the second might violate the law by yielding an equal or even a greater amount of satisfaction. One cup of water in the morning, another in the noon and a third in the evening may not yield diminishing utility.

3. *There should be no change in the consumer.* —During long periods of consumption the consumer will not derive diminishing utility even from the identical units of consumption, unless, of course, his income, tastes, habits and fashions remain unaltered. For, if a man's income increased and he hired, for example, a bigger house to live in, then he might be able to take full advanage of his four tables which would not be accommodated in the previous house for want of space and therefore caused him much inconvenience. Circumstances having changed, he would derive more and more satisfaction out of the four chairs as one by one they go to increase his stock of them. Similarly, his habits and fashions might also change with the result that the utility obtained from each successive unit of a certain commodity went on increasing instead of decreasing.

4. *The consumer's attitude should not change.*— So long as consumption lasts, the attitude of the consumer towards the commodity should not change. In the beginning of consumption a person may get diminishing utility from food; but later when he is overpowered by an intoxicant, his attitude towards the food may change and he may get increasing utility from each additional unit of the meal.

Such assumptions as these are usually expressed by a single phrase *other things being equal* in the statement of the law.

§ 3. **Formal statement of the Law.**—Each additional unit of a commodity consumed within a given time gives, other things being equal, less satisfaction to a person than the previous unit.

The Law of Diminishing utility or, preferably, the law of diminishing marginal utility is the same as the Law of Satiable Wants.

§ 4. **Exceptions to the Law.**—Subject to the qualifications mentioned already, the law holds good in all cases except in the following few cases in which additional units of the commodity yield *temporarily* increasing, not decreasing units of satisfaction, as consumption is prolonged.

1. To a very thirsty man, little drops of water, though identical and taken successively, will bring a greater craving for water and for some time he may derive more and more satisfacion from every drop that is consumed. But after a certain quantity of water is thus drunk. the intensity of his thirst will be reduced and he will begin to have diminishing utility from every additional drop. The Law will come into operation after a certain point in consumption is reached.

2. Articles of fashion and display give, not decreasing but increasing satisfaction to their owners with every addition to the stock of those articles in their possession. There is no limit to variety, nor to the quality of articles of fashion and display and a person under their influence will find the utility resulting from additional units ever increasing. If to the idea of display is added the spirit of competition the tendency is further strengthened. But this sort of satisfaction has its limit and cannot be pushed beyond it. In this case also, after a certain point in consumption is reached, the consumer begins to get diminishing utility from the additional units of the commodity. Moreover, it should be noted that love of display is not a single want but a composite one whose satisfaction will come very slowly.

3. A departure from the law may also be noticed in the case of curious and rare articles. The possession of a rare specimen of old pottery, say a vase, gives great pleasure to the collector, but the other of its kind that completes the pair, may be the source of a far greater amount of pleasure. A horse that makes a pair with another of the same size and colour so as to be yoked together in one carriage, yields more pleasure than the first one. But the increase in satisfacion with every fresh unit continues only until as many units have been acquired as to make a complete set or group or pair, i.e., until the object of collection is fulfilled. Thereafter the additional satisfaction rapidly decreases with every addition to the total stock. Here again, additional utility begins to decrease after a certain limit in consumption is reached.

It would thus be noted that these exceptions are only *apparent* and not real ones because in each case the law begins to operate after a certain point in consumption is reached.

The following cases are supposed to be additional exceptions to the Law of Diminishing Utility:—

4. It is claimed that the utility derived from additional pegs of wine to a drunkard does not diminish. At the best the drunkard is not in a normal state of mind and hence outside the scope of economic enquiry, but even in his case the law begins to operate after he has taken a certain quantity of liquor.

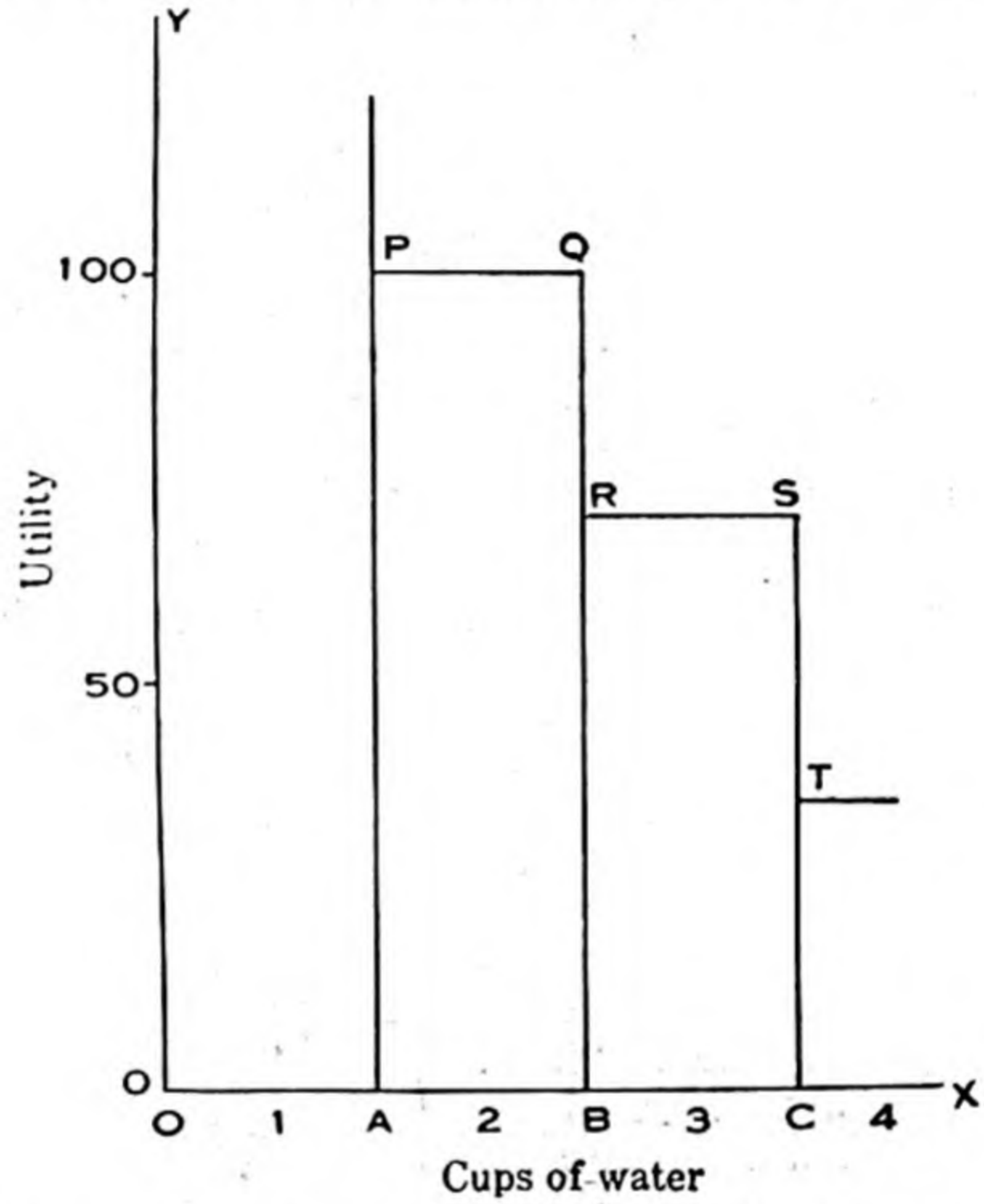
5. The miser's love for money is considered as insatiable. Certainly there is no end to the acquisitive tendency but after his possessions have attained huge proportions even a miser must feel less pleasure in receiving certain additions to his stock of wealth. Moreover, it may be pointed out that wealth is not a single commodity but stands for all sorts of exchangeable possessions, and consequently its consideration does not fall within the purview of this Law.

6. The case of telephone is another exception. As the number of connections in a telephone exchange system increases, the utility of each connection is increasing to its owner because he can communicate with a larger number of people. It is suggested, therefore, that the Law of Diminishing Utility does not hold good in this case. But this is really no exception as the telephone owner is receiving more utility from the telephone exchange now that it claims more numerous customers and not because he has more than one line at his own place. If two telephones are installed in his house or shop, the utility of the second is bound to be less than that of the first.

DIAGRAMMATIC REPRESENTATION OF THE LAW

Diagrams help vision and intellect to a great extent in the formation of a mental picture of economic truths, thereby rendering them easy to understand. The numbers already taken to represent the diminishing utility derived from the consumption of successive cups of water provide us with the material necessary for the consumption of such a diagram. In the figure given below, two lines OX and OY are drawn at right angles to one another. Line OX is divided into equal parts, each representing a cup of water; similarly, line OY is divided into equal parts which represent equal units of satisfaction. Division OA stands for the first cup of water. On OA stands a rectangle whose height represents the amount of satisfaction derived from the first cup. As the amount of satisfaction in this case is infinite, the rectangle is kept open at the top so as to give the idea that its height is unlimited. AB is the next division on OX; it represents the second cup of water which yields 100 units of satisfaction. On AB stands the rectangle APQB whose height AP, representing the amount of satisfaction from the second cup of water, is equal to that part of OY, which stands for 100 units of satisfaction. The two rectangles are joined to one another to create the impression that the consumption of water is continuous and uninterrupted. The amount of satisfaction obtained from the third cup of water is similarly shown by the rectangle BRSC, and so on. All the rectangles in the diagram have equal bases, their areas

are proportional to their heights or to the amounts of satisfaction successively obtained. Hence so long as their heights remain unaltered, their areas will be unaffected even if their bases are made longer or shorter. In order to bring into prominence the effect of diminishing utility resulting from



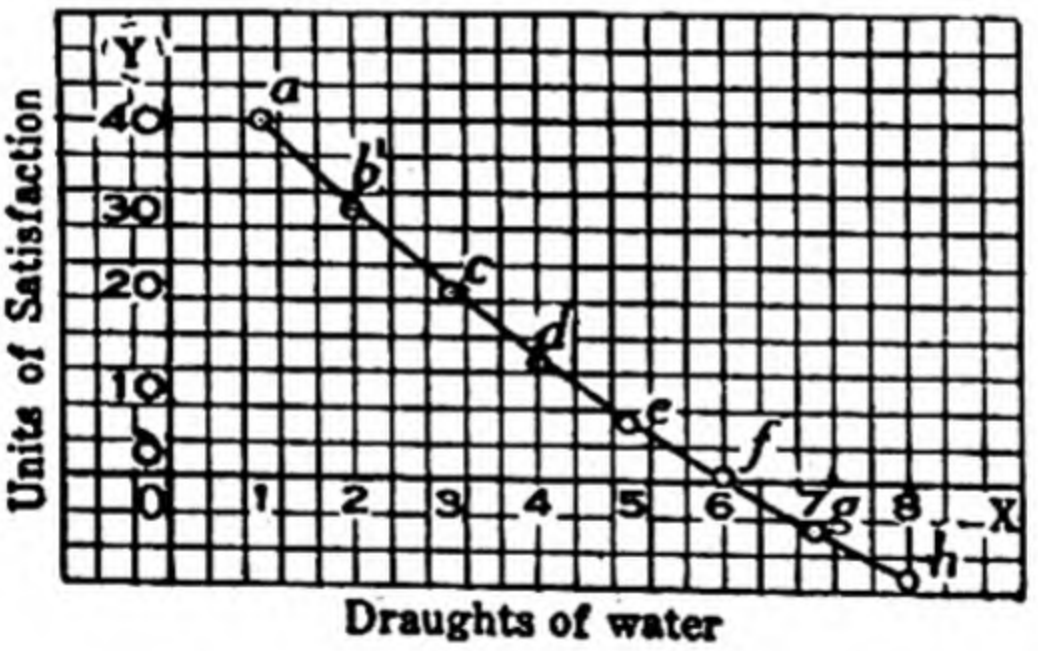
the continuous consumption of water, the bases of the rectangles should be made very very small but not too small. The rectangles should, in fact, be bars (thin rectangles) which are supposed to have height but no width practically.

A glance at this diagram is enough to suggest that as the number of cups increases, the utility derived from each successive cup decreases, which is clearly indicated by the heights of the rectangles getting smaller and smaller. In such a simple case as this, the usefulness of diagrams may appear to be little or at least not more than that of numbers; but in cases where one has to deal with huge and complex masses of figures, diagrams prove to be of signal value in quickly suggesting to the eye the meanings of facts concealed in figures.

There are two kinds of commodities we generally come

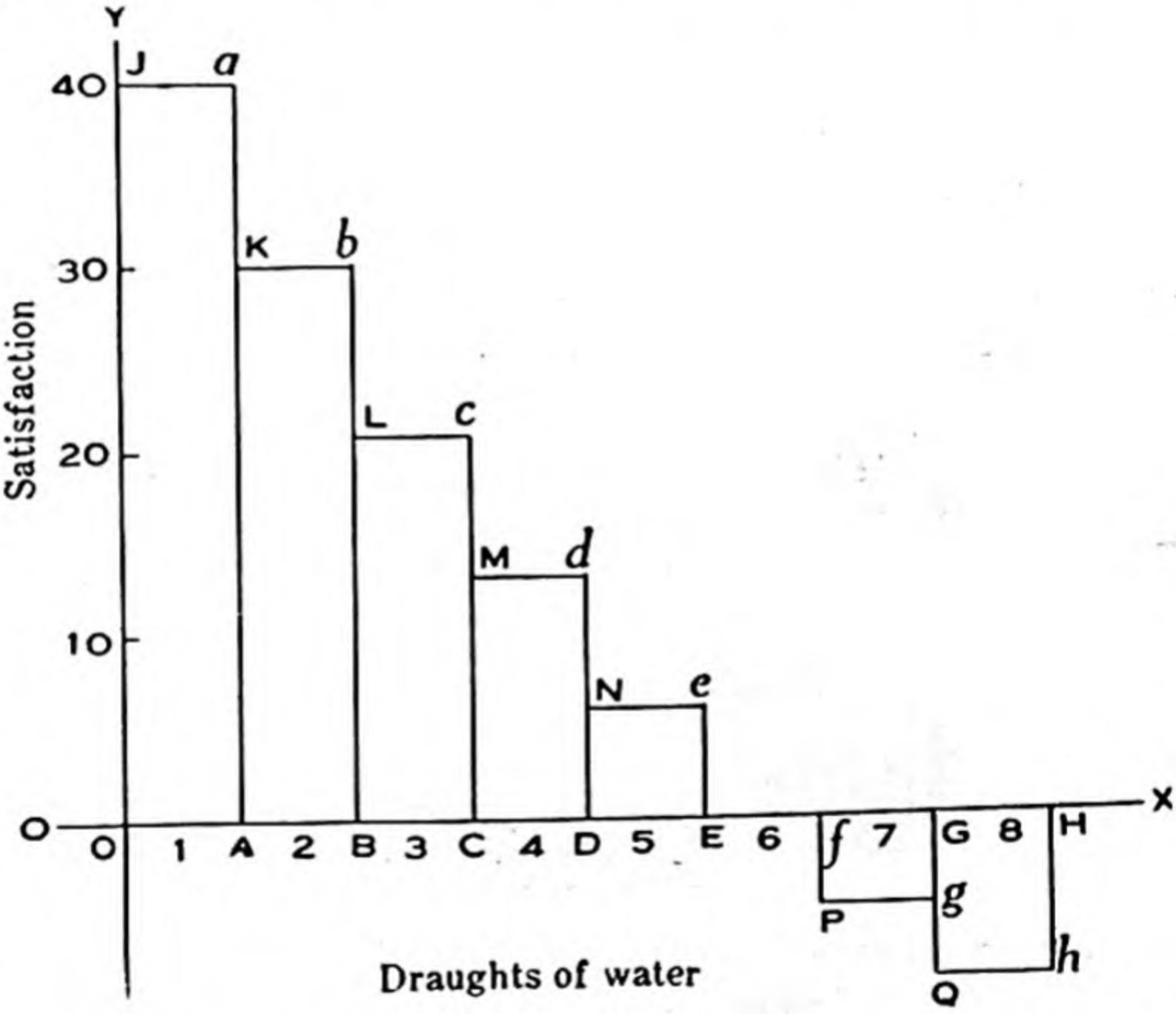
across: Divisible and Indivisible. By divisible commodities we mean those commodities which can be divided into portions of any desired size without occasioning loss in their values. Wheat, sugar, water are some of such commodities; each of them retains its identity after it is broken up even into the minutest divisions, and suffer no loss in their values. One maund of wheat, for example, can be divided into four heaps of ten seers each; wheat will remain wheat and the value of one big lot of one maund will be equal to the total value of four lots of ten seers each. By divisible commodities we mean those commodities whose value is impaired if they are divided. Chair, coat and horse, for instance, cannot be divided without their identity being destroyed and value undergoing much loss. If a horse is cut up into four pieces, the four pieces put together will not make the horse; also the value of the four pieces will not be equal to the value of the whole live horse.

Rectangles may be used with advantage to show the sorts of commodities, divisible or indivisible; but a *curve* may also be used for the same purpose in the case of divisible commodities. To fall back to our example of water, a divisible commodity which can be consumed in small instalments of one chhatak each just enough for one draught



or pull, let us suppose that the successive draughts of water yield units of satisfaction respectively equal to 40, 30, 21 13, 6, and 0. These figures have been translated into a curve as shown in the above diagram. The sides of five small squares on the hroizontal axis OX represent two draughts and the side of each small square on the perpendicular axis OY represents 4 units of satisfaction. Any other suitable scale could be chosen for the plotting of the curve. The sloping nature of the curve suggests that the

utility from each successive unit of consumption descends or decreases as consumption is prolonged. The curve meets the horizontal axis in *f*, a point which represents zero (no) satisfaction obtained from the sixth pull of water. Once the consumption of water starts, it is supposed to have been continued in this case until at last the satisfaction is carried down to a point where water ceases to yield satisfaction. If consumption were carried beyond this point, further draughts of water would cause disutility (pain). The portion of the curve shown below the axis OX represents this fact. Points *g* and *b* on it correspond to 5 and 9 units of disutilities (negative utilities) or −5 and −9 units of utilities derived from the 7th and 8th draughts of water. The zero-utility point is known as the **point of satiety** or *complete satisfaction.*



If all these utilities were represented by their rectangles as in diagram on page 49, the resulting figure will be of the form shown below. The curve of diagram on page 50, it may be observed, is the one which is formed by the lines joining *ab*, *bc*, *cd*, *de*, *ef*, *fg*, *gh*, the corner points of the rectangles. The rectangular diagram and the curve are identical when the units of consumption are infinitely small.

§ 5. **The Margin.**—Literally 'margin' means end or limit. When we consume successive units of a commodity, we cry out after some time ' thus far and no further,' ' we don't want any more of it,' ' we are satisfied for the moment.' When this limit is arrived at, we say the margin of consumption is reached.

But if the margin of consumption is reached, it does not necessarily mean that the point of satiety is reached. Consumption may have to be stopped sooner than the point of satiety for various reasons such as the following:

(a) For want of sufficient quantity of the commodity consumption has to be stopped before complete satisfaction is reached as is the experience of the poor who generally remain half-fed.

(b) On account of poor quality, untoward incident or mishap like bad cooking, a fly in the dish, or a disquieting news, a consumer may terminate his consumption before fully satisfying his want though the commodity available may be plentiful.

(c) Because of a variety of commodities placed before a consumer, he may be tempted to taste every one of them. But as the capacity of his stomach is limited he is able to eat only a limited quantity of each though that alone is not enough for full satisfaction.

(d) Due to shortage of time consumption may be discontinued as a railway passenger having only a limited time at a road-side station is often unable to do full justice to the meal. On many an occasion a student has to cut short the enjoyment of an interesting story or a keenly contested game or a friendly conversation because in course of a day he has to attend to many duties and cannot devote more than a limited period to each of them.

§ 6. **Marginal and Total Utility.**—*Marginal utility* of a commodity is the utility obtained from that

unit of it which is at the end (margin) of successive and uninterrupted consumption of that commodity. Thus if a man pulls three draughts of water, the utility derived by him from the third draught is said to be the marginal utility of water to him, when three draughts of water are taken. Similarly, the utility of the fifth draught is the marginal utility of water when five draughts of water are taken. Marginal utility is understood not with reference to a particular unit of a commodity but of the entire quantity of the commodity consumed at one time, though it is equal to the utility derived from the last unit consumed. In the example of the draughts of water, if five draughts are taken, the marginal utility of this much of water will be 6 units which is the utility got from the 5th or the last draught. Similarly, 21 will be marginal utility of 3 draughts and 13 that of 4 draughts of water consumed.

Total utility of a commodity is the aggregate utility resulting from the summation of the utilities obtained from all the units consumed in one continuous act of consumption. In our foregone example of the thirsty man, the utilities got from successive draughts of water are 40, 30, 21, 13, 6 and 0. These add up to 110 which is the total utility to him of the six draughts of water taken. If only three were taken, the total utility would be $40+30+21$, that is, 91, while if four of them were taken, the total utility would be $40+30+21+13$, or 104. The fourth draught would increase the total utility 91 by 13, or if the fourth draught were not consumed, the total utility 104 would be reduced by 13. This 13, therefore, which increases or decreases the total utility by an addition or deduction of a draught of water measures the marginal utility of water when four draughts are drunk.

Marginal utilities are *positive* upto the point of satiety and *negative* beyond it. Positive utilities

yield pleasure and negative cause pain to the consumer. Every one feels pleasure by consumption upto the point of satiety and experiences pain when the satiety point is passed over. Positive marginal utilities increase total utility by successive additions to it, while negative marginal utilities decrease total utility by successive deductions from it. (*Total utility is a maximum at the satiety point.*) For, 110, the total utility at the satiety point is bound to decrease as consumption is pushed beyond that point.

§ 7.ℵ **The Marginal Utility of Money.**—Money is only a means of exchange. It is never wanted for its own sake but for what it will buy. It is neither like articles of food, clothes and shelter which give direct satisfaction to the consumer, nor like tools and instruments that help a man to produce more wealth. Still it is subject to the Law of Diminishing Utility. If a person buys an orange for an anna, the utility of the orange is the utility of that anna. He can have as many oranges as annas with him; for example, five annas will buy five oranges, and if they are consumed successively, they yield diminishing utility; and the utilities thus obtained are the diminishing utilities he gets from his five annas when he buys oranges for them. Similarly, if he were to buy bananas for his annas, he must ultimately get diminishing utility from the bananas as well, though it is not necessary that the marginal utilities in this case should be the same as the marginal utilities in the case of oranges. Utility depends upon the taste and the liking of the consumer; if he likes oranges more than bananas, an anna spent on oranges will mean greater satisfaction to him than the same anna spent on bananas.

It follows from this that the same amount of money spent on different commodities brings different amounts of satisfaction to the consumer. In the same manner it can be argued out that the same amount of

money with different individuals generally means different amounts of satisfaction to them as their tastes and capacity to enjoy differ. But it can be said with reference to an individual that the greater the amount of money possessed, the greater the quantity of a commodity that can be bought; and the greater the quantity that can be had for consumption, the smaller the amount of the marginal utility obtained. Hence the marginal utility of money to a poor person is higher than the marginal utility of money to a rich person. But this is true only when we assume that the tastes and sensibilities of the two are exactly alike and that both of them spend their money on the same commodities. As this is not to be met with in actual life, we conclude that two individuals derive from the consumption of a commodity marginal utilities which cannot possibly be compared even if we measure them in terms of money. It is only approximately true to say that the utility of a commodity is measured by the amount of money which a consumer is willing to pay for that commodity rather than go without it.

§ 8. **Consumer's Surplus.**—Consumer's surplus is the excess of satisfaction which a consumer receives over and above that for which he pays. Suppose an orange is expected to yield 40 degrees of utility to a consumer and another, it being the second, expected to yield only 30 degrees. The question is,—'at what rate will he receive the utilities from them?' Not at the rate of 40 as the second does not yield more than 30; neither at the rate of the average or $(40+30)\div 2$ for the same reason. It can be said that they yield utility at least at the rate of 30 degrees each. It means that when the second is present along with the first, the worth of the first is reduced to the level of the second. Similarly, if five oranges are to be eaten, any could be the fifth and therefore the safest statement to make is that all the five yield utilities at least at the rate of the satisfaction given by the fifth. And as the

fifth is the marginal unit, it fixes the rate for the entire group of five oranges.

When the question for the payment of these five oranges arises, the consumer, to be on safe side, will pay for them at the rate of the fifth. That is, though the five oranges will yield him utilities in the order of 40, 30, 21, 13 and 6, he will pay for them at the rate of 6 only, that is, total payment will be for 6×5 or 30 degrees. But actually he will receive the total utility to the extent of $40 + 30 + 21 + 13 + 6$ or 110 and thus he enjoys the consumer's surplus equal to 110—30 or 80 degrees of utility.

† *Money value of consumer's surplus.*—This surplus can be measured in terms of money. If, suppose, one degree of utility is worth one pie to the consumer, the worth of the oranges to him will be 40, 30, 21, 13 and 6 pies respectively. But at the time of payment for those oranges he will not pay more than at the rate of 6 pies each, the rate fixed by the worth of the marginal orange. Thus he will receive 110 pies worth of satisfaction for which he pays only 30 pies and thus enjoys 80 pies worth of consumer's surplus.

The amount of consumer's surplus enjoyed on the necessaries is very high because the utility derived from these urgent wants is great, yet their prices are usually low. The surplus on the comforts is quite appreciable, but rather low or nil on luxuries as they are expensive goods but yield little real satisfaction.

The concept of consumer's surplus is helpful in the matter of imposition of taxes and control of prices of the commodities. Those goods on which the surplus is high can bear relatively higher taxes as the consumers can pay portions out of their surplus. If tax is imposed on a commodity yielding low surplus, the burden of the tax will prove oppressive and people may forego the consumption of that article. Similarly, prices of the articles should be so fixed as to yield the maximum surplus to the consumers. As a matter of fact, the

sign of economic prosperity is the increase in the surplus earned by the consumers on their expenditure. Industrial efficiency must reduce the prices of goods and thus augment the consumer's surplus. On the other hand, a rise in price of commodities reduces the surplus. Now that an envelope costs -/1/3 pies instead of one anna, the surplus on it has been reduced by -/-/3 pies.

EXERCISES

1. State carefully and explain clearly, with the aid of a numerical example and an illustrative diagram, the Law of Diminishing Marginal Utility. Show that it is as much true for money as for gold, silver and other commodities.

2. If a person's stock of a commodity increases at a uniform rate, the benefit derived from it increases at a diminishing rate.' Explain this statement numerically and also diagrammatically.

3. What are the limitations, that is, assumptions and exceptions, of the Law of Diminishing Utility? How are they put in the statement of the Law? Are the exceptions, real or only apparently so?

4. Distinguish between marginal utility and total utility. If you had four *laddus* all alike, could you tell which of them was the marginal laddu? Bring out the relation between marginal utility and total utility.

5. Show how it is possible for consumption to reach its margin before the point of satiety is reached. Under what condition would the margin of consumption coincide with the point of satiety?

6. What is meant by consumer's *surplus*? How is it measured? Of what use is it in practical llfe?

7. When we consume more and more units of any commodity (a) the marginal utility of that commodity diminishes, (b) total utility increases. Explain illustrate with examples and diagrams.

commodity to another, until all his money is spent up.

When more than one commodity is to be purchased, the marginal utility of money does not fall so rapidly as it would if there were one and only one commodity that could be had. This is evident from our example of milk, eggs and wall-paper given earlier. For, if the consumer purchases eggs and no other commodity, the utility of each successive anna runs thus: 53, 43, 34, 26, 19, ... ; but if he purchases eggs, milk and wall-paper, the utility of each successive anna runs thus: 53, 48, 46, 43, 39, ... The fall in utility will be found to be slower still, if more commodities are included in the list of purchases. The rich, who can afford to buy a large number of commodities, have a very gradual fall in the marginal utility of their money; the point of satiety in their case recedes farther and farther away, as the list of their requirements swells. Even the richest cannot reach the goal, for no amount of money can ever completely satisfy human wants of which there exists an endless variety in this world.

EXERCISES

1. Show how diminishing utility sets a limit to our expenditure on a commodity. Can you deduce from this any law for the guidance of people's expenditure? State that law and illustrate it imagining, for the moment, that you have ten rupees to spend and that you are out to buy three things, long cloth, ghee and oranges.

2. Enumerate the obstacles which confront a consumer in getting the greatest amount of total satisfaction by spending his income in accordance with the Law of Equi-marginal Utility. How do fashions and customs influence the Law in actual life?

3. Suppose you had a brother and a sister both younger to yourself, how would you distribute 20 (identical) *resgullas* among them so as to make their satisfaction a maximum. Give reasons for your answer.

sign of economic prosperity is the increase in the surplus earned by the consumers on their expenditure. Industrial efficiency must reduce the prices of goods and thus augment the consumer's surplus. On the other hand, a rise in price of commodities reduces the surplus. Now that an envelope costs -/1/3 pies instead of one anna, the surplus on it has been reduced by -/-/3 pies.

EXERCISES

1. State carefully and explain clearly, with the aid of a numerical example and an illustrative diagram, the Law of Diminishing Marginal Utility. Show that it is as much true for money as for gold, silver and other commodities.

2. If a person's stock of a commodity increases at a uniform rate, the benefit derived from it increases at a diminishing rate.' Explain this statement numerically and also diagrammatically.

3. What are the limitations, that is, assumptions and exceptions, of the Law of Diminishing Utility? How are they put in the statement of the Law? Are the exceptions, real or only apparently so?

4. Distinguish between marginal utility and total utility. If you had four *laddus* all alike, could you tell which of them was the marginal laddu? Bring out the relation between marginal utility and total utility.

5. Show how it is possible for consumption to reach its margin before the point of satiety is reached. Under what condition would the margin of consumption coincide with the point of satiety?

6. What is meant by consumer's *surplus*? How is it measured? Of what use is it in practical llfe?

7. When we consume more and more units of any commodity (a) the marginal utility of that commodity diminishes, (b) total utility increases. Explain illustrate with examples and diagrams.

commodity to another, until all his money is spent up.

When more than one commodity is to be purchased, the marginal utility of money does not fall so rapidly as it would if there were one and only one commodity that could be had. This is evident from our example of milk, eggs and wall-paper given earlier. For, if the consumer purchases eggs and no other commodity, the utility of each successive anna runs thus: 53, 43, 34, 26, 19, ... ; but if he purchases eggs, milk and wall-paper, the utility of each successive anna runs thus: 53, 48, 46, 43, 39, ... The fall in utility will be found to be slower still, if more commodities are included in the list of purchases. The rich, who can afford to buy a large number of commodities, have a very gradual fall in the marginal utility of their money; the point of satiety in their case recedes farther and farther away, as the list of their requirements swells. Even the richest cannot reach the goal, for no amount of money can ever completely satisfy human wants of which there exists an endless variety in this world.

EXERCISES

1. Show how diminishing utility sets a limit to our expenditure on a commodity. Can you deduce from this any law for the guidance of people's expenditure? State that law and illustrate it imagining, for the moment, that you have ten rupees to spend and that you are out to buy three things, long cloth, ghee and oranges.

2. Enumerate the obstacles which confront a consumer in getting the greatest amount of total satisfaction by spending his income in accordance with the Law of Equi-marginal Utility. How do fashions and customs influence the Law in actual life?

3. Suppose you had a brother and a sister both younger to yourself, how would you distribute 20 (identical) *resgullas* among them so as to make their satisfaction a maximum. Give reasons for your answer.

4. A man purchases two seers of wheat and one seer of sugar, the rates of the two things being 8 seers and 4 seers a rupee respectively. In what proportion do you expect the marginal utilities to be at the end of his purchase?

Indicate the relation, if any, between marginal utility and price. Explain why gold commands a high value and air or water little or no value at all.

5. Estimate the importance of the Law of Equi-marginal Utility and discuss whether marginal utility ever reaches the zero point in the case of water and money, both of which can be put to several uses.

CHAPTER V

FAMILY BUDGETS

§ 1. **Family budgets.**—A complete statement of the income and expenditure of a family is called a family budget. These family budgets furnish an interesting study of the distribution of one's income over various heads of expenditure. In order to make the best use of his money, every thoughtful consumer tries to adjust his expenditure in a way that promises to confer upon him the greatest benefit under the circumstances. When prices of the commodities change, or his income varies, or his habits of consumption differ, our common experience tells us that he makes alterations in his budget of consumption with the sole object of reaping the greatest advantage from his money.

§ 2. **Engel's Law of Family Expenditure.**—Dr. Ernest Engel (1821—1896), the great German statistician was Director of the Statistical Department, Berlin (1860—1882) and won a world-wide reputation. He collected a large number of family budgets of different classes of people living in Saxony in 1857. By a close and comparative study of these budgets he arrived at the following conclusions with regard to family expenditure:

(i) The larger the income, the smaller was the percentage of it spent on food.

(ii) The larger the income, the greater was the percentage of it spent on education, health, recreation, amusement, etc.

(iii) Whatever the income, about the same percentage of it was spent on clothing, rent, fuel and light.

The following table shows the percentages of the expenditure of the poor, the middle class and the rich families on the basis of which the above-mentioned inferences were drawn.

Engel's Statistics

Yearly Income of Families

Items	Poor		Middle Class		Rich	
	£45—£60		£90—£120		£150—£200	
	Per cent.		Per cent.		Per cent.	
1. Food	62		55		50	
2. Clothing	16		18		18	
3. Lodging	12	95	12	90	12	85
4. Heat & Light ...	5		5		5	
5 Education & Religion	2		3·5		5·5	
6. Legal Protection ...	1		2·0		3·0	
7. Care of Health ...	1	5	2·0	10	3·0	15
8. Comfort & recreation.	1		2·5		3·5	
Total . .	100		100		100	

The striking uniformity in the habits of consumption of large classes of people as discovered by Dr. Engel led several investigators to collect family budgets in almost every country and compare them. Though the conclusions drawn from these investigations were not in perfect agreement with those of Dr. Engel, yet the law of family expenditure based on Dr. Engel's inferences has been confirmed in a general way.

Food supply being the first concern of every con-

consumer, rich or poor, the minimum of subsistence in every case remains practically the same. The difference in total food expenditure is due to a greater variety and a better quality of food articles consumed by the comparatively rich people, and this, in fact, is not proportionately as expensive. That is the reason why the percentage expenditure on food does not increase with an increase in the income. But the total expenditure on food does grow with the income, so that if the income of the family increases, a part of it is absorbed by food.

As regards clothing and lodging, the requirements of Indian families are so varied that no general statement can safely be made. The essential items of dress do not differ much because of the climate here being temperate over a longer period of the year; but caste distinctions, social divisions and western modes of life now adopted by many families introduce far greater differences in expenditure which may be much above or below the proportional expenditure to be made on this item. The housing requirements of the people being widely dissimilar, it is extremely difficult to speak of any one standard of accommodation for a family in India. Two rooms are enough at times to serve for every household need of the family. It is not necessary to have separate rooms for different purposes; kitchen may be used to sleep in, and a family can very well do without a bath room or a drawing room. Thus the expenditure on dress and shelter in this country is entirely a matter of personal taste and circumstances.

After spending on primary wants of food, clothing and lodging, poorer families have very little left out of a fixed income to spare for comforts such as education, health, recreation, etc. Every increase in the size of the income, therefore, leads to a greater percentage expenditure on comforts and a higher and better standard of life to the poor families.

The expenditure of a family thus is best studied from an analysis of the expenditure on necessaries, comforts and luxuries.

Here is given the family budget of a cultivator.

FAMILY CONSUMPTION BUDGET—*November, 1937—April 1938*

of

Rajaram Singh, Cultivator.

Members of family:—3 Adults (1 male and 2 females), 2 sons of 15 and 3 yrs.

Name of the Article	Quantity	Rate	Value	Remarks
1. Food—	Md. Sr.		Rs. a. p.	
(a) *Grains and pulses:*				
Wheat ...	3 20		0 0 0	Produced on home farm.
Gram ...	1 5	14 Srs. a Re.	3 0 0	
Rice ...	2 10	10 „ „	9 0 0	Market value Rs. 11-3-6p.
Arhar ...	18	6½ „ „	2 12 0	Taken by turns.
Moong ...	30	9 „ „	3 5 0	
Masoor ...	19	10 „ „	1 14 6	
(b) *Vegetables and Fruits:*				
Vegetables	...	...	5 10 0	Assorted. Average daily expense being -/-/6.
Fruits ...	...	...	2 0 0	Seasonal varieties.
(c) *Sundries:*				
Milk ...	4 20	...	0 0 0	Given to sons; supplied by own cow and buffalo.
Ghee ...	14	...	0 0 0	Home produce.
Mustard & other oils ...	6	...	2 10 0	
Sugar & gur	...	...	2 8 0	
Salt ...	12	...	1 2 0	
Spices ...	...	...	1 8 0	
			35 9 6	

II. Household—

(a) *House*:

	Rs.	a.	p.	
House rent	0	0	0	Belongs to self; rental value Rs. 2/8/- a month.
Repairs	2	0	0	

(b) *Fuel and Light*:

Faggots	4	8	0	
Dung cakes	0	0	0	Prepared at Home
Lantern	0	3	0	Lantern wick only.
Kerosene oil (one tin)	3	6	0	

(c) *Pots and utensils*:

1 Lota	0	14	0	
2 Katories	0	6	0	
1 Iron ghara	0	15	0	
Earthen pots	0	6	0	
	12	10	0	

III. Clothing—

(a) *Dress*:

Warm coat	4	6	0	For the elder son.
3 Shirts	2	13	0	
2 Jackets (cotton stuffed)	2	12	0	
3 Dhoties	2	10	0	
4 Banyans	1	2	0	
2 Caps	0	6	0	
1 Pair of shoes	1	1	0	

(b) *Sundries*:

2 Quilt covers	1	6	0	
2 Sheets	1	8	0	
3 Towels	0	9	0	
	18	9	0	

IV. Health and Education—

(a) *Health*:

Quinine	0	8	0	
Tincture Iodine	0	4	0	

(b) *Education*:

	Rs.	a.	p.	
Tuition Fees at Rs. 2/13/- a month	16	14	0	The elder son is a student of Class IX in M. School at Benares.
Books and Stationery	1	7	0	
Half-yearly Examination fee	0	12	0	
Library subscription	0	6	0	
	20	3	0	

V. Services and Entertainments—

(a) *Services*:

Barber	3	8	0	Occasional shaves and hair-cuts.
Washing and soap	2	0	0	
Sweeper	9	0	0	
Domestic service	0	0	0	

(b) *Entertainment*:

2 Cinema visits	0	8	6	By the son.
2 Visits to hockey matches	0	2	0	
Guests on Holiday	1	8	0	
	7	10	6	

VI. Miscellaneous—

Travel	0	12	0	Two visits to Benares.
Cycle repairs	0	8	0	
Correspondence	0	4	6	
Religious Ceremony	1	6	0	Katha on Basant Panchami.
Charities	0	6	0	
Pan and Tobacco	2	4	0	
	5	8	6	

VII. Savings—

Savings Bank Deposits	5	0	0	
Cash	1	3	0	
	6	3	0	
Grand Total Rs.	106	5	0	

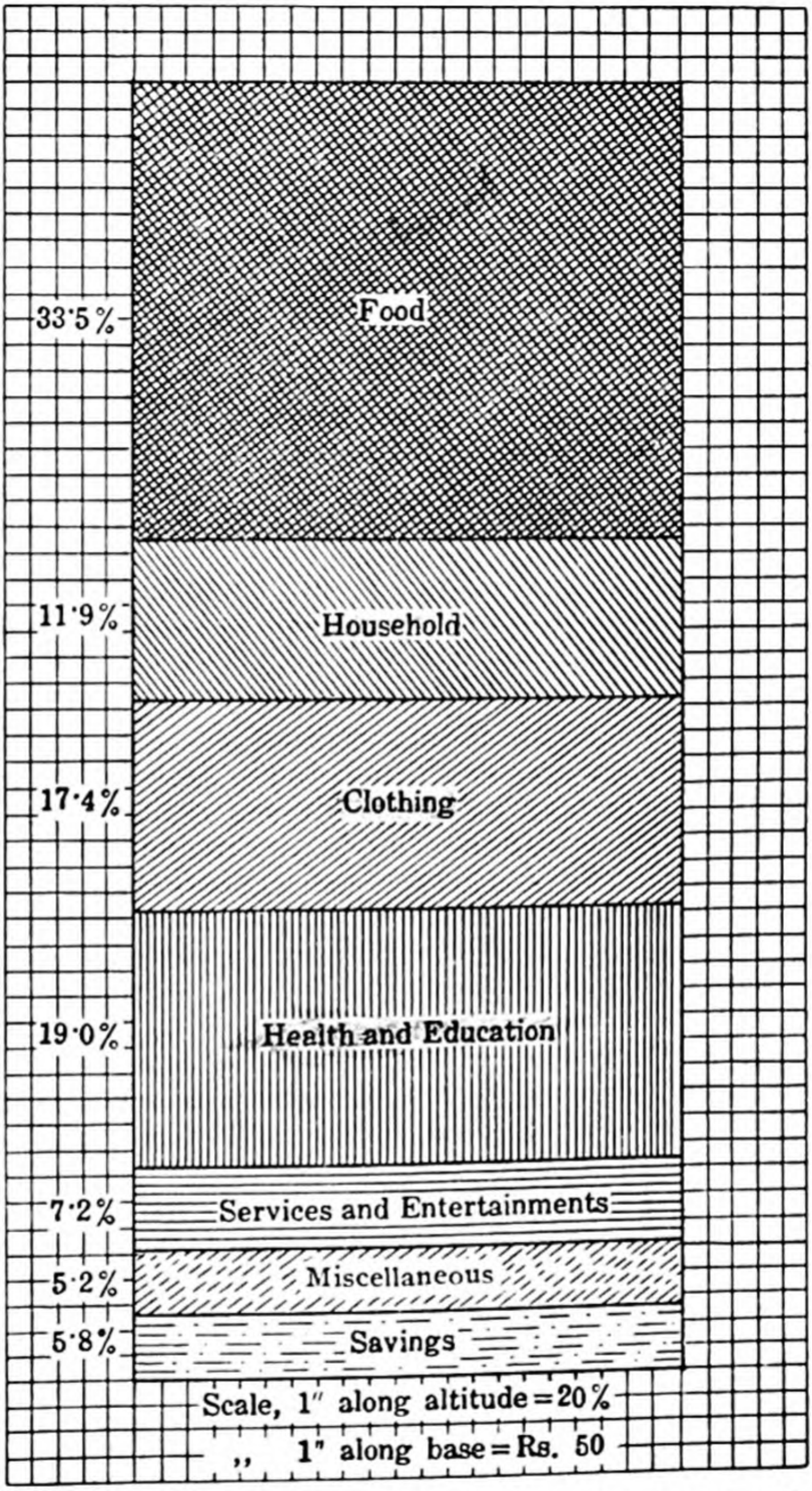
Note:—This budget has not been altered in the light of the prices prevailing in the market for fear of presenting an abnormal picture.

SUMMARY OF THE EXPENDITURE

Heads of Expenditure	Amount	Percentage of total	Cumulative percentage figures for diagrammatic representation
	Rs a. p.		
1. Food	35 9 6	33·5	33·5
2. Household	12 10 0	11·0	45·4
3. Clothing	18 9 0	17·4	62·8
4. Health and Education ...	20 3 0	19·3	81·8
5. Services & Entertainments	7 10 6	7·2	89·0
6. Miscellaneous	5 8 0	5·2	94·2
7. Savings	6 3 0	5·8	100·0
	106 5 0	100/0	

DIAGRAMMATIC REPRESENTATION OF FAMILY BUDGETS

To aid vision and intellect, rectangles are the best to employ. A rectangle has two dimensions, length and breadth; therefore two facts may be shown at one and the same time. Along the breadth is usually shown the income of the family and along the length, its *percentage* expenditure. Since the total percentage expenditure in each case is necessarily equal to 100, the lengths of all rectangles representing as many family budgets are kept to be the same. But the breadths of these rectangles are not equal, because the incomes of the families differ; they are, however, in the same proportion in which are the incomes of the families concerned. For the facility of measurements to save both time and bother, rectangles are drawn on a squared paper divided into tenths of an inch. When such a squared paper is used and a height of ten inches is chosen to represent percentage expenditure, we at once get 100 small divisions to work with. A height of 5 inches may also be used with advantage, as in our diagram. But whether ten inches are taken or five, the breadth of the rectangle should not be disproportionate to its length; it should neither be too small nor too big. The diagram must give a pleasing appearance, and for this purpose a convenient scale of measurement for the income to be shown along the base is necessary. No hard and fast rule can be laid down for the choice of a suitable scale which is more or less a matter of convenience, purpose in view, and the total space available for the diagram.



To show the distribution of income over various heads of expenditure, each rectangle has to be sub-divided. This sub-division is carried out thus: First, the scale of percentages is marked along the length of the rectangle. Then the

cumulative figures of the percentage expenditure on various heads of expenditure are worked out. This is done by simple addition. The cumulative figures are marked along the scale of percentages in their proper places and from the marks thus obtained, horizontal lines are drawn parallel to the base, thus dividing the entire rectangle into sections or components. Since there are seven heads of expenditure, the rectangle is divided into seven components. These components should have the same order in which the various heads occur in the scheduled expenditure of the family.

If there are several rectangles representing the expenditure of several families, they must be placed side by side in a vertical position with their bases falling in the same straight line. This should bring corresponding components against one another and thereby render comparison easy. To further facilitate comparison, corresponding components are often given the same tints, but colours should not be used, if they are likely to be expensive and also to spoil the appearance of the diagram. Only a few know how to put in colours satisfactorily and consequently the alternative method of hatching, barring, crossing, dotting, etc., is used in place of colouring. This is fully illustrated in our diagram which looks quite attractive even without colours. When components are thus treated, they stand out quite distinctly from one another, although forming part of the same rectangle.

After the diagram is constructed, a glance at it is enough to give a clear picture of the proportional expenditure on the various heads, because the areas of the components bear the same ratio to one another as the expenditures incurred on the items which they represent. If two components have the same height, i.e., represent the same percentage expenditure, their areas and therefore the expenditures which they stand for must have the same proportion to each other as the bases of the components.

Good charts must possess the merit of being easily compared. They must be capable of being read rapidly. They must be accurately and neatly drawn. They must have a suitable heading and scale. The following mnemonics will be found of great help in remembering these points:—

Comparison.
Heading and legend.
Accuracy.
Rapidity of reading.
Tidiness, neatness.
Every letter of the word 'CHART' is made use of.

1. How to collect Budget Information

Before an attempt is made to collect facts and figures it is necessary to learn how to get the correct information required for a family budget.

Time.—Time is the first thing to which the proposed inquiry is to relate. It is only for a certain period of time that income and expenditure of an individual or a family can be calculated and compared. No doubt the consumption of commodities continues without a break; yet to facilitate the task of taking stock, it is indispensable to imagine a break in its course at the end of a period and compare it with the income that has accrued within the same period. The period may be a week in case of people who earn weekly incomes, a month for those who are paid for their efforts after a month, or a season for those who, like farmers, sow and reap two or three crops in the year.

Questionnaire.—The investigator should put down the questions that he is likely to ask for the purpose of his investigation. This enables him to get a clear-cut notion of the nature of the information needed. To make the task of investigation easy, the questions ought to be classed under suitable broad headings. Those that fall under one class should be simple, plain and quite relevant to the inquiry. They must be capable of being easily and quickly understood by the people who may be illiterate and whose condition is being investigated. Such questions as are likely to cause annoyance should be either avoided or worded very tactfully and carefully. Questions touching self-respect or private life are generally of this nature.

Representative family.—The next thing to do for the purpose of collecting material for the construction of a family budget is to select a family which is fairly representative, that is to say, the type of which is

most commonly met with. It should neither be too big nor too small. If a farmer's family is selected, it should not be an extraordinary family. If an artisan's family is selected it must be as typical of the class as possible.

It should be carefully borne in mind that very few people especially in villages keep a detailed account of their expenditure. The typical men have to be selected out of them. Hence if they are approached it is seen that they supplement their accounts from memory, and the memory is apt to be biassed by notions as to how the income ought to have been spent especially when the accounts are put together for another's eye. If, however, those are approached who keep careful accounts and are willing to give correct information voluntarily, they are often not typical. But this should not discourage the investigators, whose skill lies in extracting out of the typical family the information they require.

Conducting of inquiry.—In order that the object of inquiry may not be defeated, the investigator ought to convince the informants at the very outset that he is no agent of the Government because he is likely to be mistaken for one; that he is not collecting facts and figures to get their revenue or taxes enhanced for otherwise the poor villagers will be suspicious and frightened and will probably not give correct figures of their income and expenditure; and that he is conducting that inquiry for a definite purpose which must be clearly stated.

The questionnaire must be read carefully before a question is put. If the investigator knows full well what sort of information he seeks to gather, he can subject the informant to a searching examination if necessary and thereby get the information tactfully out of him. Before the inquiry is actually started, it is necessary to make friends with the informant. The investigator will always find it to his advantage to

speak kindly and gently to him and to make him feel that he is keenly interested in his welfare. But he should not either joke or laugh too much during investigation, because too much indulgence in these matters usually leads the other party to think that the investigator is not serious about his business. If this impression is created, the informant finding that his time is wasted would like to go away. Haphazard questions generally confuse the informant. He should, therefore, be asked such questions as are closely connected to one another and belong to one single group. This course will make his task of supplying correct information much easier. The informants are generally not very intelligent and quick-witted. They take much time in recalling facts and figures. Hence sufficient time must be allowed for the answer of a question before another question is put. If it be suspected that answers are not trustworthy and that the facts supplied are distorted, exaggerated, coloured and unreliable, a gentle cross-examination may be undertaken, but the informant should not know of it, otherwise he would resent it. Immediate neighbours may sometimes be consulted with a view to verify the facts and figures collected. If still there is any doubt about the accuracy of the information, it should be rejected. The more probable and trustworthy facts alone ought to be accepted.

In order to estimate the losses of the informant, the investigator should state a few common sources of loss to him and thereby set the memory of the informant at work to think out if he has suffered any. He may, for instance, suggest in the case of a pottter that the pots usually break before and after they are baked; in the case of a farmer that wild animals, birds and erosion damage his crops; and in the case of a goldsmith that his goods are subject to theft.

Ignorant people are not likely to supply information in the form in which the investigator would like

to have it. He himself is, therefore, required to convert it to proper form and not unnecessarily trouble the informant through a volley of questions to do the same for him. The farmer may not be able to tell him exactly what quantity of corn was produced from his fields. He may, on the other hand, tell that it must not have been less than four cart-loads. This can be turned into maunds by knowing the capacity of a cart. In the case of a farmer, it may further be necessary to convert a part of his produce into money. A good deal of grain, fruit and vegetables, which enters into his consumption is grown by him. That is his income as well as expenditure. But this expenditure is in kind whereas his other expenditure is in money. To make it fall in a line with his other expenditure, the expenditure in kind has necessarily to be turned into money. This conversion, in fact, should be based on the prices of those articles at the time of consumption. Such prices, however, cannot be had. Hence the prices of those things prevailing at the harvest time ought to be used, though this can hardly be said to be the right procedure. For this reason, the budget of consumption must contain not only the total expenditure in money but the quantities and the rates of the commodities as well.

At the time of investigation, short notes are enough for the answers returned. But as soon as the inquiry is over, the information must be duly entered, otherwise facts are likely to become mixed up or slip out of memory.

2. Purposes served by Family Budgets

To the householder, family budgets are of great importance. They serve as the most effective check on a harmful leakage—extravagance or wastage. Thus they regulate his expenditure, direct it on proper lines and thereby teach him thrift and foresight. No householder can afford to let money slip

through his fingers; consequently he has always to assess properly the urgency of all his wants, present and future, to give each its due importance in his budget with the object of getting the greaest satisfaction. The art of securing the maximum satisfaction out of a given income consists not only in distributing expenditure so as to get as much satisfaction from the last unit of money spent for one thing as from the last unit of money spent for another, but also in distributing expenditure over different periods of time in such a way that the last unit of money spent at one time gives as much satisfaction as the last unit of money spent at another. By comparing budgets from month to month, the household is able to locate the items on which a little reduction or a little increase of expenditure is likely to result in his greater well-being and higher efficiency.

To the economist, family budgets provide an interesting and instructive study. They help in the formulation of such useful economic laws as Engel's Law of Consumption. Through them he gets an insight into the real economic condition of the people whose budgets he studies. They can serve to show whether the people, cultivators in India for example, are happy and prosperous, whether only a few of them, *e.g.*, capitalists, enjoy the niceties while others, *e.g.*, labourers, are deprived of even the necessities of life, whether necessaries, decencies and ordinary comforts on which the richness of life depends are within the reach of all, or the majority consists of the wretch and unfortunate who are almost crushed under the pressure of grinding poverty.

To the statesman, family budgets serve a very useful purpose. There is no means better than the family budgets that can more vividly reflect the effect of any taxes levied on articles of general consumption, that can more truly tell which class of the people will bear the burden of a certain tax. He can know from

them whether there is the necessity of a legislative measure to put a stop to, or to regulate the consumption of harmful articles. He can also see from them whether a progressive rate of taxation is likely to benefit the public by cutting down the inequalities that exist in the ditsribution of wealth *per capita* and by redistributing the amount of money thus realized in a more equitable manner.

EXERCISES

1. What are family budgets and what are they useful for? To the householder? To the economist? To the statesman?

2. What is Engel's law of consumption or family expenditure? How far are its conclusions applicable to Indian conditions?

3. How do you collect budget information when your teacher wants you to do it? Take the case of a potter to illustrate your answer.

4. What are family budgets? Why are they constructed? Are there any laws that Govern the expenditure of large and small incomes on family budgets.

5. Prepare an imaginary budget for a Muslim tailor's family of five (a father, a mother, two daughters, four and fourteen years of age, and a son, eighteen years of age). Figure out the percentage cost of each group of items to the total cost of the budget in question, and draw a diagram to represent the expenditure.

6. The following are the expenses of a labourer: Ata -/2/6 a day; pan and biri -/-/3 a day; wood Rs. 2/- a month; oil and ghi Rs. 2/- a month; rice -/-/6 a day; a pair of shoes Rs. 2/4 a year; house-rent Rs. 3/- a month; sweets -/8/- a month; vegetables -/-/6 a day; sweeper -/4/- a month; charpai Rs. 1/2 a year; kerosene -/2/- a week; dhotis Rs. 3/- a year; salt -/2/- a month, country liquor Rs. 2/- a month; other clothes Rs. 3/12 a year; debt payment Rs. 2/- a month; religious and social expenses Rs. 6/- a year; travel Rs. 3/- a year.

Calculate all expenses on a monthly basis (a month=30 days or 4 weeks) and classify all the expenditure under general heads. Draw a diagram on the same scale as that of the diagram given in the book. How do the two diagrams compare with one another?

CHAPTER VI

STANDARD OF LIVING

§ 1. **Meaning of Standard of Living.**—Generally speaking, by the standard of living of a person is meant his customary plane of existence or his habitual consumption and is thus determined by the wants to which he has become accustomed due to long consumption. Consumption of necessaries, comforts and luxuries over a sufficiently long period of time becomes so much a matter of habit with the consumer that it may aptly be described as his second nature. Habit once formed does not easily change though a certain degree of elasticity is possessed by the standard of living which it is easier to raise than to lower it. The standard of living varies from class to class and nation to nation and also from one period to another with the same class or nation though it is seen that individuals belonging to the same class have practically one standard of living.

§ 2. **High and Low Standard of Living.**—A high standard is distinguished from a low standard in so far as it ensures both a greater economic well-being and a greater productive efficiency of the consumer, i.e., it leads to a better and fuller life and makes the consumer a more efficient producer. A low standard of living, on the contrary, cramps the consumer's life by preventing its full growth and reduces his efficiency as a producer.

§ 3. **Expensive and Cheap Standard of Living.**—Just because wants constitute the standard of living, it should not be supposed that an individual having more numerous wants and therefore spending more money on their satisfaction shall have a high standard, while another person spending a smaller amount of

money on a fewer wants shall have a low standard. An extravagant living is certainly an expensive standard of living but not necessarily a high standard. Similarly, a frugal living may not really be a low standard.

Really speaking the standard of living is determined not only by the number of wants but also by the nature of those wants; that is, not only by the amount of money spent but also by the way in which it is spent. For instance, a clerk spending Rs. 90 out of his monthly income of Rs. 100 may be living expensively but need not have a higher standard than that of another clerk who spends only Rs. 80 out of an equal income. Though the second clerk lives more cheaply, yet he may be exercising care and judgment in selection of wants and their satisfaction and thus maintaining and improving his efficiency while the extravagant clerk might be after all spending his money indiscriminately on harmful and luxury consumption and thus ruining his health and efficiency. In conclusion, if the major part of a person's income is spent on the necessaries of life and efficiency and reasonable comforts, he should be considered to have a high standard; but if a big proportion of it is laid out on conventional necessities, requirements of getting and maintaining a big family, and on luxuries specially of a harmful nature, his standard must be considered as low.

§ 4. **Standard of Living in India.**—On the whole the standard of living of Indians is low, really much lower than the standard obtaining in countries of the West. This conclusion is justified both by the low income of Indians *per capita* and also the preponderance of conventional expenditure in the budget of an average Indian. The following figures will show that though the per head average income in India has been steadily increasing, it is still much below that in other countries and necessarily therefore the standard is much lower.

Year	Estimated by		*Per capita* income
1870	Dadabhai Naoroji	...	Rs. 20
1900	Lord Curzon	...	,, 30
1913	Wadia & Joshi	...	,, 44
1921	Shah & Khambatta	...	,, 67
1921	G. Findlay Shirraz	...	,, 107
1922	,, ,, ,,	...	,, 113

A comparison with the following figures will be illuminating.

Country			Income per head
U.S.A. ...	...	...	Rs. 2,053
Canada ...	...	...	,, 1,268
U. Kingdom	...	...	,, 1,092
France ...	...	...	,, 636
Japan ...	...	...	,, 271
India ...	...	...	,, 113

The difference in the standard of living great as it is, is accentuated if the view is accepted that the per head income in India is not Rs. 113 but Rs. 82 as shown by some Indian economists. Out of this sum Rs. 10 per year is taken up by the Central, Provincial and Local taxation, and in the case of the farmers and artisans that constitute the bulk of Indian population, a good percentage is lost by payment of interest on huge indebtedness. Thus the effective spending power is greatly reduced. And yet this expenditure is regulated more by conventional necessities than by those of health and efficiency.

§ 5. **Causes of Low Standard of Living.**—(1) The fundamental cause is the *poverty* of the people as is shown above. And this low income in India is due to a variety of causes, the most important being the undeveloped economic life of the country. The fact that the enormous natural resources of the country have not been fully developed is borne out by the following figures:—

Country	Income *per capita*	
	Industries	Agriculture
U. S. A. ..	721	175
Canada ...	470	213
U. Kingdom ...	412	62
Japan ...	158	57
India	12	59

India is predominantly an agricultural country and yet the income from agriculture is pitifully low because of the primitive art of cultivation. A thorough overhaul of our agricultural industry is urgently desired though so far only halting steps have been taken in this direction. But it should be recognized that no improvements in the method of agriculture can enable it to yield an income approaching that secured from the large scale industries. The remedy obviously lies in rapid industrialization of the country.

2. The ever-increasing *indebtedness* of the agriculturists is a great hindrance in the improvement of their standard of living and the same argument is applicable to the factory workers also. High rates of interest along with the periodical repayment of the original loan leave little for them to spend upon themselves.

3. *The size of the family* is another factor for their low standard of living. The average size in India is 4.5 but because the richer people generally have smaller families, the number of members in the poor-class families is much higher than the average. The upkeep of a big family naturally leaves less for the earning members to spend upon the needs of their health and efficiency and thus their standard is low.

Apart from these factors there are certain considerations that discourage hard work and encourage

cheap living and thus are responsible for the low standard of living in the country.

4. *The physical environments of the country*, its mild climate without the rigours of cold winters, keep the wants of dress, shelter and food, all at a low level. One cannot help marking how little is wanted to keep alive a person in this country as compared to cold countries of the West. This realization often seems to remove the necessity of hard work and greater enterprize and hence the poverty of the people and their low standard.

5. *The attitude of the people on life*, is also responsible for their low standard. The Indian culture has never been acquisitive or selfish. It has always distinguished itself by giving and sacrificing and not by possessing and consolidating. And in spite of various economic and political changes through which Indian society has passed, this characteristic still persists. *Religion* also teaches to give here so that one may receive hereafter; it also preaches aloofness from material world as the only means to attain salvation. These points of view may be undoubtedly grounded on solid philosophy yet they have discouraged people from making economic advancement, have glorified poverty and are responsible for their low standard.

6. *Simple living and high thinking*, is a noble maxim but it has been wrongly understood to mean that low standard of living leads to moral advancement. Poverty is not the cause of spiritual greatness though spiritually developed people renounce the world and its attractions. It is time people realized that the satisfaction of primary requirements is the first condition of peaceful contemplation and undisturbed religious life, and devoted more efforts to the production of wealth and improvement of the tone of life.

7. *Lack of education*, is also responsible for low standard of living, as it narrows one's outlook and prevents the growth of wants for self-expression and

self-improvement. Because illiteracy is prevalent more in the rural areas than in the urban and also because the villagers do not come in cultural contact with the city people, their standard of living is lower and does not improve.

§ 6. **Is the Standard of Living in India Rising?**—It is difficult to give a definite answer to this question in the absence of accurate and adequate statistical information on the economic conditions of the people. The figures relating to the income *per capita* are at the best only estimates. Similarly, the deductions made from income in the form of taxes and interest on debts cannot be properly calculated. Yet there are certain grounds on the basis of which it may be inferred that the tendency is for the standard to rise in India.

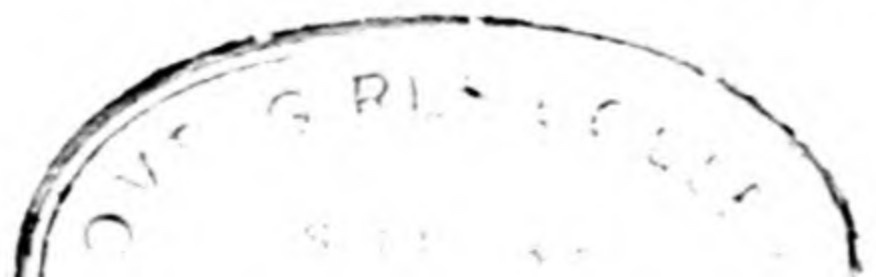
Even if the estimates of income per head as given by G. F. Shirraz be called excessive and Rs. 82 be accepted as the more correct estimate, this income is four times as much as that of 1870 and about double of the pre-war figures showing an appreciable increase in income and consequently in the standard of living in spite of a rapid growth of population in the country. The conclusion is also borne out by the figures of growing foreign trade, the nature of the goods imported and expansion in India's internal trade and industry.

An all round improvement is also visible in the number and quality of the commodities and services enjoyed by the consumers these days as compared to a few years ago. Because of the import and Indian manufacture of luxury goods they are entering more and more the consumption of individuals with the result that the luxuries of twenty years ago are well nigh becoming necessaries of today. The dress of the people is distinctly better; the mud-houses are being replaced by pucca houses; travelling facilities are being utilized more and more; books and magazines are read in greater numbers; radios, gramophones, cinemas, and means of entertainments are being patronized to an

increasing extent. All those indications undoubtedly point to a general rise in the standard of living of the people. Though it may be conceded that the rise in the Indian standard of living is not as sharp as in industrially advanced countries of the West and East, and also that the rise has occurred more in the standard of the city people than in that of the village folk.

§ **7. Standard of Living and the War.**—The second world war in course of its six long years has brought about unprecedented changes in the economic life of the people in India, which though economically an undeveloped country, had to bear proportionately a heavy burden both on her own account and that of the United Nations. The amount of money in circulation rose more than fourfold of the prewar quantity and the prices rose by about 300%. Though increased income resulting from expanded production and sale to foreign government and consequent scope for employment, reached a very high level, a corresponding rise in prices coupled with the scarcity of consumption goods was responsible for a lowering of the general standard of living. The war presented a paradoxical example of bulging purses with empty cupboard. But India was no exception to the rule which applied to all the belligerent countries, specially of Europe and Asia.

But the prospect has brightened. Savings have been accumulated by private individuals in the form of hoards and postal and bank-holdings, by richer people in the form of shares and debentures of enterprizes running and to be started and by the various governmental bodies in the form of reconstruction funds. This enormous saving when utilized in production will provide cheap consumer's goods in plenty and will ultimately help in raising the standard of living of all who have saved. The opening of the regular international trade will also place



at their disposal the fruits of increased technical efficiency of the world and the average well-being of the common man is bound to increase.

§ **8. Standard of Living of Working Classes.**— The most satisfactory basis of determining the standard of living of any particular class is formed by the enquiries into their family budgets but unfortunately such an investigation has not been undertaken in India. The Bombay Labour Office has carried out two such enquiries in 1921-22 and 1932-33 for working classes in Bombay city while similar enquiries were conducted in Sholapur, Ahmedabad, Nagpur, Jubbulpore and Cawnpore. The following comparative figures regarding the distribution of expenditure will serve to indicate the standard of living of working classes at different centres.

Percentage Distribution of expenditure

Heads of Expenditure	Bombay 1932-33	Ahmedabad 1933-35	Nagpur 1927	Jubbulpore 1927	Madras 1938
Food ...	46 60	49·31	64·10	66·00	52 63
Clothing ...	7·75	9·12	10·70	10·86	4·50
House rent ...	12 81	10·97	1·92	1·44	11·14
Fuel & light	7·11	6 65	9 62	7 95	6 67
Miscellaneous	25·73	23 95	13·66	13·75	25·06
Total ...	100 00	100 00	100 00	100·00	100 00

As the standard of living is conditioned to a great extent by the size of the family and its income, the following figures will be of interest in this connection.

	Bombay	Ahmedabad	Nagpur	Jubbulpore	Madras
Average size of family (in persons) ...	3·70	4·05	4·33	3·76	6·03
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs a. p.
Average monthly income.	50 1 7	45 5 0			37 5 11

It will be seen that the 'miscellaneous' group, which includes such items as interest on loans and instalments of debts repaid among others, accounts for a comparatively large percentage in Bombay, Ahmedabad and Madras while in the cities of C.P. is nearly half as much. Accommodation is again cheaper in the C.P. with the result that the percentage expenditure available for food is greater.

EXERCISES

1. Analyse the concept of ' standard of living.' Show how it varies from time to time, class to class and country to country.

2. Distinguish between (a) high and expensive and (b) low and cheap standard of living. How does the standard of living influence the economic well-being?

3. Is the standard of living in India low? Give reasons that are responsible for this state of affairs and suggest remedies.

4. " The standard of living of people in India has been lately rising steadily." Comment upon the statement with special reference to the effects of world war II.

5. It is often said that the customs, institutions, religions and moral ideas of the people of India favour a comparatively low standard of living. Is it a fact? Discuss.

6. Account for the difference in the percentage expenditures of working-class men of Bombay and Nagpur. How do these compare with the consumption budget of an artisan of your own town?

CHAPTER VII

SOCIAL SIDE OF SPENDING

§ 1. **Spending and Saving.**—Spending means the utilization of money for the satisfaction of present wants, while saving means laying aside a portion of present income for expenditure at some future date. The difference therefore is that of time: spending is expenditure today; saving implies expenditure later on.

§ 2. **Relation between Spending and Saving.**—Assuming that a man's earning remains constant, his expenditure will determine the amount of his savings. If he spends a large amount he can but save little, but if he spends less he can save more. If he feels that difficult times are ahead and he has not enough to fall back upon, he should take care to reduce expenditure and effect a little more saving. Similarly, if he is trying to save more but finds that the amount left for present expenditure is insufficient to make both ends meet and causes inconvenience to life, he should wisely reduce savings and spend more on the present wants. A prudent man will always endeavour to distribute his expenditure over his present and future needs to the best of his advantage.

Saving increases spending in the future. Money saved is meant to be productively used in the mean time and this will bring in extra income to the saver. If a person saves Rs. 100 today and puts it in a bank or purchases Postal Cash Certificates, after 5 years when he spends these savings, they would have amounted to, say, Rs. 115 representing an increased power to spend in the hands of the saver.

§ 3. **Saving and Hoarding.**—Saving must be distinguished from hoarding which means keeping money idle in a safe or underground or in the form of ornaments and jewellery. Hoarding neutralizes money and prevents its productive use. To this extent it is a

disservice to the community. In this form it is liable to wear and tear and pilfering and stealing, and is a loss to the individual also. That is why hoarding is to be discouraged both from individual and social point of view.

People hoard either because they are influenced by habit or custom as Indians generally convert their savings into ornaments, or because the investment facilities are not available, as in rural areas where people are obliged to keep their savings at home. In the past, India has shown extreme partiality for the precious metals specially gold that was imported and absorbed by private individuals in huge quantities. Though this habit has earned for the country the nickname of the "sink" of precious metals yet the ornaments and jewellery of the people have often rescued them in times of famines and financial stringency when harvests were destroyed and business was depressed. Moreover, the rich countries of the West like the U.S.A. and France controlling the major portions of the world supply of gold have exceeded India's thirst for this metal though there it has been utilized more for monetary purposes. But India too has shown since 1931, when gold in enormous quantities began to be exported, that gold lying in her hiding places can be available for productive purposes in times of emergency.

§ 4. **Individual Expenditure and Social Well-being.**—It is of great consequence to society how a person spends his money. The expenditure undertaken by an individual not only determines his personal standard of living and thereby affects his life as a consumer and efficiency as a producer, but it also influences the society directly and indirectly in various ways so much so that the question of social economic well-being is intimately connected with the problems of individual expenditure. These different aspects are discussed below one after the other.

1. *Effect of Spending on Producers.*—The producers will produce only such articles as are demanded by the consumers and on which the consumers spend their income. With a change in the taste, fashion and requirements of the consumers, the producers have to alter their production accordingly. This shows how spending directs production and therefore stresses the necessity of our expediture being guided by wisdom and discretion.

If people become addicted to wine, the inevitable consequence would be that labour and capital at present being utilized in the production of articles of greater social advantage (dairying for example) will be diverted to the manufacture of intoxicating drinks, and the dairying industry will be suffering for want of adequate capital.

Similarly, the labour and capital may be employed in the production of articles which yield utmost a momentary pleasure or satisfy some whimsical or less useful demand of the people. The investment made in the manufacture of fireworks would be better utilized in socially more profitable channels.

The consumption of harmful luxuries will be adversely affecting the productive capacity of the consumer himself and through this loss the social efficiency in producing wealth will be reduced.

2. *Effect of spending on Consumers.*—The consumption by individuals affects other consumers by example and association as it is by imitation and contact that habits of smoking, drinking and fashions in general are picked up.

Secondly, the demand for luxurious articles by some consumers will divert resources to the manufacture of these articles while the production of articles of necessity and comforts will be reduced and their prices will rise. The poorer people with lesser incomes will find them more expensive and either reduce their consumption or take to substitutes

of lesser quality. Thus the social economic welfare will be lowered.

3. *The Idle Rich*.—None can object to the extravagant life of a person who has retired from productive activity and is enjoying the well-earned rest with his well-earned savings, but some people do dispute the right of those who have inherited large fortunes and are busy only squandering them without adding one iota to the wealth of the community. Without entering the controversy of this dispute, it may be pointed out that the need of regulation and wise control of expenditure by the people of both the categories is as essential as in the case of others less fortunately placed in life.

4. *The drones and beggars*.—Different is the case of the drones who, taking shelter behind the protective walls of joint-family system, remain wilfully idle, contribute nothing to the family income and thus reduce the standard of living of the entire family. The percentage of the earning members of the families in India is very low and though the joint-family system is intended to afford relief to the weak, the old and the decrepit, it undoubtedly encourages inactivity, and to that extent is harmful to the well-being of the family and the community.

But it is a peculiar disease of India that hoards of sturdy mendicants and able-bodied professional beggars pass as true *sanyasins* and *faqirs* and thrive on the wealth produced by the industrious section of the country. They can easily earn enough to support themselves but they find it easier to live more comfortably than their frugal patrons on their misplaced charities. Apart from a good number of richly endowed temples and mosques maintaining a class of hereditary beneficiaries, there are certain castes of beggars who enjoy all the luxuries of family life and even own zemindaris. This system not only demobilizes a big section of able-bodied workers who would

have otherwise worked as honest labourers and added to the social wealth and prosperity of the country, but also misdirects charity which should be entirely reserved for the lame, the blind, the orphans and the widows.

§ 5. **The Problem of Luxuries.**—The consumption of luxuries as such should not be banned. There are harmful luxuries and harmless luxuries; and while there is no justification for the former, some indulgence is permissible with regard to the latter. Though it is accepted that a luxury is indispensable neither for life nor for efficiency and is a mere superfluity, yet luxury is a mark of progress. Some of them raise the tone of life and enrich it as the luxuries of fine arts and literature etc. Moreover, it is quite possible that with an improvement in the economic state of society a luxury of today may become a comfort and even a necessity of tomorrow and, therefore, the prohibition of luxury consumption will totally block economic progress.

Wants are the motive force of economic activity and it is the desire for the enjoyment of luxuries that encourages people to work more so that they may spend more and enjoy more. The prohibition of luxury consumption will slow down economic effort and enterprize, reduce employment, discourage inventions and improvements in the art of production and eventually retard economic progress.

Luxury production stimulates high-class workmanship which is borne out by the old-established industries of silk, glass, scents, ivory and others with the patronage of the courts in the middle ages.

Luxuries are said to bring about a better distribution of wealth in the society, as high prices paid for them are received by the producers of these goods and they are usually poor class people benefiting at the expense of the rich consumers.

Luxuries indirectly exercise a check on the rapid growth of population, as the consumers, used to expensive living or guided by the idea of self-indulgence, observe restraint on the size of the family for fear of lowering their standard of living.

The case of Indian luxury in the form of jewellery and ornaments has already been referred to as a provision against the times of famines and economic depression.

But there is another side to the picture. Harmful luxuries should not be permitted even to the rich as they harm the consumer physically, mentally, morally and economically and injure the society in the end. In case some concession is made to their cravings, they should be strictly controlled within reasonable limits. The poor, on the other hand, should in no case enjoy the liberty of these luxuries as they can ill afford them. Drinking and allied habits have proved the bane of so many working-class families in every industrial area, and labourers should be scrupulously kept away from them.

The case of harmless luxuries too is not irrefutable. In every country there are armies of the poor and the destitute that do not get even a single square meal a day. Money spent on luxuries can therefore, find better use if it is employed in producing things that will introduce some sunshine in their wretched lives. One cannot exhaust the list of necessaries and comforts which are scarce for a great majority of people. If their production is taken up instead of luxury articles, they will not only become more plentiful and cheap and thus be within the reach of a greater number of people, but will also create employment for a greater number of labourers than that employed in luxury industries. The fear that with the reduction of luxuries the specialized and high-class skill displayed in them will disappear, is unfounded as this skill can find

plenty of scope in beautifying the articles of common consumption and thus afford opportunity to a bigger class of consumers to appreciate and enjoy the workmanship. As for the question of better distribution of wealth, it can be brought about to a greater extent and more successfully by the taxation policy of the government and well directed acts of charity and philanthropy.

§ 6. **Social Interference in Individual Expenditure.**—An individual can generally be trusted to spend his money as wisely as he earns it because after all it is the individual himself who stands to gain by wise expenditure and lose by unwise expenditure. Society, therefore, does not interfere with a man's liberty in spending money unless, of course, his spending is likely to harm himself or prove a menace to his neighbour. Just as the society forbids one to set fire to his own house and thus endanger the life and property of his neighbours, likewise it forbids or regulates the consumption of certain commodities in his interests and also in the interests of others.

In so far as money is spent on the necessaries of life and efficiency, which help a man to maintain his health, vigour and efficiency as a producer, and on reasonable comforts that enrich and improve his life, the need for any interference with private expenditure does not arise. But it is for the common good that the society should interfere with heavy expenditure on luxuries of even harmless kind, conventional necessaries, and the consumption of harmful commodities.

Luxury is not necessarily an evil while certain luxuries help people in their attempt at self-improvement and make life more worth living. But heavy expenditure on luxury goods is neither beneficial to the individual nor to the society as has been shown before, and therefore the consumption of even harmless luxuries should be regulated. In India where custom exercises great influence on people's expendi-

ture, men are at times compelled to undertake unnecessarily heavy expenditure on conventional necessaries. The dowry system has already broken many a family while on occasions of marriage, birth and death, money is spent out of all proportions to the accumulated savings or earning capacity of the family. At times loans are contracted to meet such expenditures which take away a good portion of the future income by way of their payment and thus cripple the prosperity of the family for a long time to come.

Education is the best remedy for these evils. The illiterate and the ignorant are custom-ridden, and education and sustained propaganda alone can bring home to them the wasteful nature of heavy conventional expenditure. The leaders and prominent people of different castes can do well to set examples by making their own ceremonial observances more simplified and less expensive.

Harmful consumption, on the other hand, is and should be more vigorously handled. The use of certain poisonous and dangerous articles should be *totally prohibited* by the state. In India, the consumption of cocaine is prohibited and an attempt is being made in different provinces to stop the consumption of liquors though thereby the provincial governments will be losing considerable excise revenue.

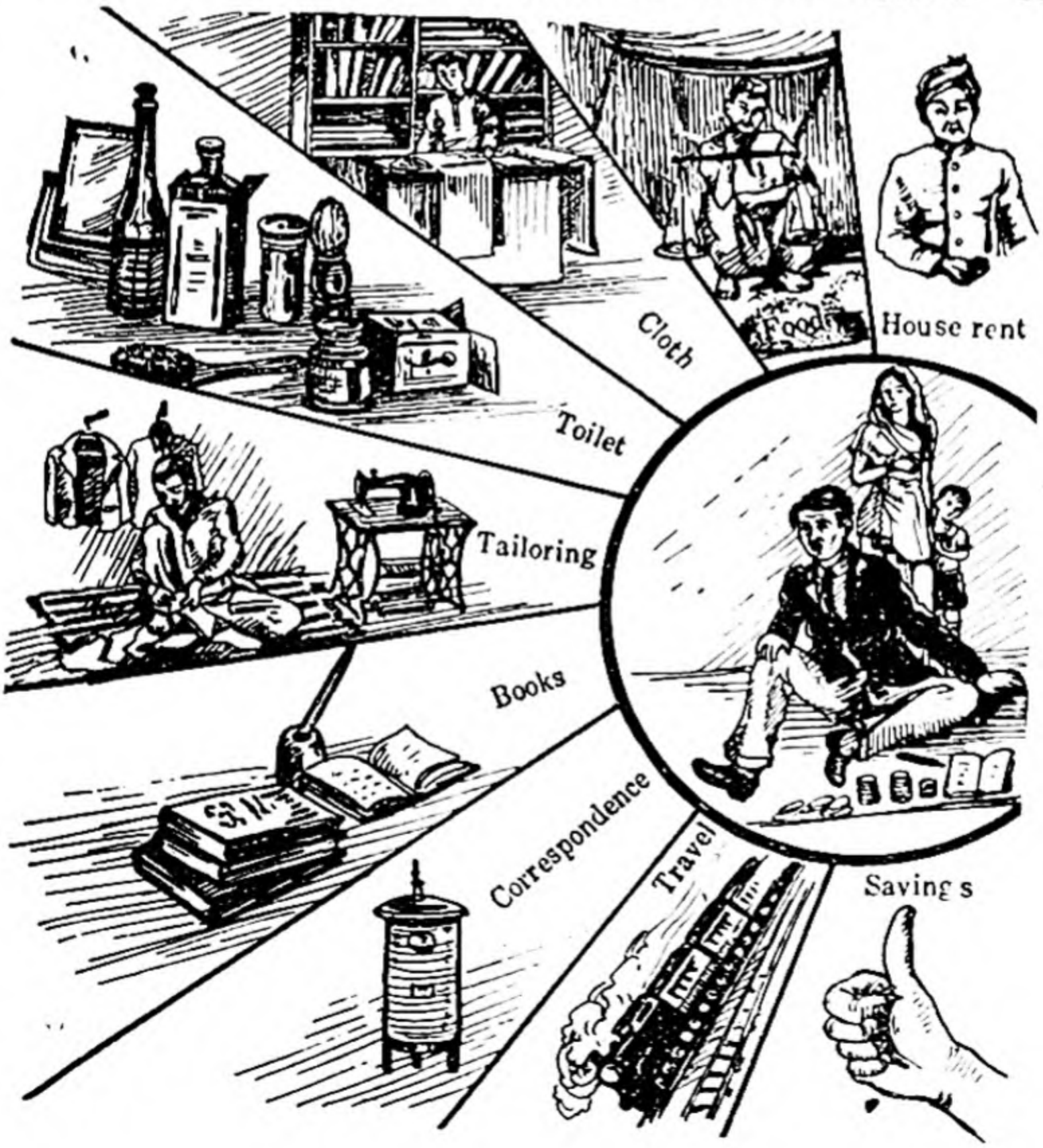
Regulation of consumption of narcotics has also been adopted. Intoxicating drugs like *bhang*, *ganja*, and *charas* are sold only by licensed vendors and the time of their sale, and the quantity that an individual can purchase are strictly limited. These limitations also apply to the sale of liquors in those areas where prohibition has not been introduced.

Opium is a government *monopoly*, not because the government earns any huge profits from its manufacture and sale but because its unregulated consumption will probably turn India into a country of

opium-eaters and undermine national health, character and efficiency. Again, it was such a noble motive which actuated the Government of India to gradually reduce and totally stop in 1936 the exports of opium to China in spite of heavy losses to Indian revenue.

High taxation is another method to discourage the consumption of harmful articles as tax increases the price of the articles and their demand falls. Tobacco, for example, imported into India pays about cent per cent duty, the object being to raise its price so that the poorer people may stop and the richer ones reduce its consumption.

Rationing of food articles like meat, flour, cloth sugar, coal and tea is introduced when there is not



enough of these articles to go round in the country as has been done in at most every country of the world. If no such step is taken, the rich alone can buy these articles because their prices rise due to scarcity, and the poor will go without them and suffer heavily.

§ 7. **How best to spend one's Income?**—*Spending is an art* and it is given to a few to be skilled in this art. Some people seldom think before spending. Being accustomed to buy certain commodities they continue buying them without considering the possibility of using cheap alternatives or reducing their quantities and thus economising the expenditure without reducing the satisfaction. They buy a fancy article for its colour or design at the price marked on it if it suits their pockets at the time of purchase. Such people either belong to a moneyed class whose business seems speedily to spend their fortunes or they are too lazy or too ignorant to think whether they are getting their money's worth. They blindly obey their impulses. Such people buy in haste and repent at leisure when they discover to their woe that before the next instalment of their income is due they are light in purse and heavy at heart. Yet there are others who are clever enough to make their money go longer than their neighbours can, and prudent enough to lay out expenditure so that they never seem to be short of money. They know how to divide their income between present and future needs and how to distribute it on their present wants.

§8. **Importance of Savings.**—A wise distribution of money over present and future consumption is as important as that on wants of the present. If more money than what is enough is spent on the present wants, less than sufficient will be left for future expenditure with the result that the marginal utilities of money spent and money saved will be unequal and total satisfaction will not be maximized.

For illustration, suppose Rs. 60 are to be spent by an individual over his requirements for two months and he decides to spend Rs. 40 this month and Rs. 20 the next month, the 40th rupee spent this month may have less utility than the 20th rupee to be spent next month and the satisfaction derived from spending Rs. 60 will be less than the maximum. A prudent consumer realizing the necessity of providing for future needs and emergencies, will save even by reducing the present expenditure, while the extravagant consumer who seems to live in the present alone, will spend his entire income to-day leaving the future to take care of itself.

§ 9. **Investment of Savings.**—Great care is to be exercised in investing the savings into profitable channels. Really speaking, a small saver prefers security of his investment to high profits and is wisely content with one or two per cent interest but complete safety of his money in Postal Savings rather than taking risks in speculative business. It goes without saying that hoarding is to be discouraged as it is good neither for the individual nor for the society.

§ 10. **Taxes and Charities.**—While spending the money over the present wants the payment of taxes and charitable expenditure should not be neglected. Taxes will have to be paid as they are compulsory contributions, and misfortunes of others do not fail to excite one's generosity in however small measure, and it will therefore be advisable to set apart money for both these forms of social expenditure whether of compulsory or voluntary nature.

§ 11. **Marketing.**—Now the problem is how to utilize the remainder income on present wants, and the following few points will be found helpful in the solution of the problem:

(i) *Determination of wants.*—Before spending on a commodity, the consumer must be certain that

78 78 78

he *really wants* that commodity and it is not only a fleeting desire created by an impulsive mood or a competitive spirit at least to equal if not excel his neighbour or friend; otherwise the money left to be spent on more urgent wants will be found inadequate with serious consequences.

(ii) *Shopping*.—Some people who regard it a matter of social distinction or a sign of refinement to shop at fashionable stores and do not care to enquire about prices at smaller shops, pay higher prices because these include the high rent, maintenance charges and cost of service at the big shops.

(iii) *Judging the commodity*.—It is not possible for all to clearly judge the commodity proposed to be purchased. Below a fine finish there may be a low-class material; edible goods may be ultimately found to be rotten or unpleasant in taste or adulterated; or mistakes may have been made in judging the quality of the stuff and estimating its life. In short, the actual utility of a commodity may in the end fall short of the prospective utility on the basis of which the purchaser has probably paid a higher price and thus failed to secure good value for his money.

(iv) *Higgling and bargaining*.—Again, one may pay more than the usual rates if he is unskilled in higgling and bargaining or if he shops at stores displaying 'One Word' or 'Fixed Price' placards and where bargaining is not permitted but looked upon as a sign of bad manners.

§ 12. **Application of the Law of Equi-marginal Utility.**—The most important consideration is the application of the law of Equi-marginal Utility in laying out the money on different goods and services to be purchased and also in putting each of those commodities to their various uses. For the total satisfaction derived from a certain amount spent by a consumer he must distribute his money or articles to be consumed on different uses to equalize their

utility at the margin of each line of consumption. The method of this application has already been explained before.

§ 13. **What is "Waste"?**—It has been discussed above that with regard to spending, the individual and social points of view may not agree. What is considered as money well-spent and thoroughly enjoyed by an individual may be sheer waste from social point of view. By waste is meant the spending of money without a corresponding amount of satisfaction resulting from it. As money is only an intermediary between man's efforts and the satisfaction of his wants, waste may be defined as making of an effort that fails to bring in a corresponding return in satisfaction.

Waste has been identified with unjustifiable luxury expenditure because in such a case there is no correspondence between the great quantity of social labour consumed and a small degree of individual satisfaction received, as gambling, drinking and other forms of luxuries. Good examples of waste are also furnished by conventional necessities like grand feasts, expensive decorations and fireworks indulged in during marriages, etc., as they afford only a temporary enjoyment yet involve the cost of great quantities of social labour and capital which might have been more profitably employed in more lasting satisfaction to the society.

Another instance of waste is found in intentional or accidental destruction of wealth as occurs by fire, earthquake, floods or war, the last resulting in the most intensive and wide-spread destruction. Such a wanton waste in the present war is appalling and unparalleled and will require long and sustained effort to repair it. The reconstruction of the damage done to-day will undoubtedly create employment to various kinds of labour and capital goods, yet it cannot be justified on that score. The money and labour

needed for reconstruction could have been used in more productive additional activities of social benefit that might have transformed the entire society.

§ 14. **War and consumption.**—The war has brought into prominence two factors regarding consumption: Complete interdependence of consumption and full governmental control of private expenditure.

(i) *International Interdependence of Consumption.*—The world has been shrinking rapidly due to quick and cheap means of transport, communication and locomotion, both surface and aerial, and different countries of the world drawn closer by ties of trade and commerce to such an extent that any disturbance in the supply of consumer's goods in one country was bound to affect others. On top of it, the global war made it obligatory for the democratic nations to form a united front and pool their resoverces in order successfully to fight the common fascist enemies. Because the needs of the fighting forces enjoyed priority above all other claims, it became necessary to satisfy them in the first instance and then distribute the balance among the civil populations which had to share what each nation could spare. This system thus made each country depend upon every other country as never before in the matter of supply of consumption good and incidentally curtailed the liberty of each country to regulate the amount and the manner of its own consumption.

(ii) *Full Governmental Control of Private Expenditure.*—This war being a total war, total effort had to be made to achieve victory and the agency competent enough to mobilize the total resources of the country could be no other than the government of the country. Therefore every thing having direct or distant bearing on the economic effort of the people had to be brought under the government control,

including the consumption of wealth like every other aspect of economic life. As referred to under section §6, necessity of equitable distribution of consumption goods led to the rationing of essential commodities and the control of their prices to check profiteering. The experience undergone by the reader is too recent and too patent to need explanation. The war is over but the war time conditions exist and will last some time. The government control will therefore have to continue till the schemes of reconstruction and rehabilitation become effective enough to repair the damages of the war, the usual channels of trade and commerce begin to flow between countries, production and exchange are enabled to run their free and normal course, and full and unrestricted competition permitted to reassert itself in the world market.

One cannot help realizing that though the government interference in private expenditure 'is resented by people at times, it becomes essential in times of emergency like war or wide-spread famine, because in its absence the well-being of the common man cannot be ensured. The war has developed fellow feeling and a sense of mutual dependence among different sections of a country, as between different nations; and inspite of some inconvenience that may be caused unavoidably by governmental control there is a general feeling among right thinking persons that if timely planned and wisely executed, the control measures are bound to prove a boon to society as a whole.

EXERCISES

1. Distinguish between spending and saving. Is a spendthrift of any use to society?

2. Are you in favour of luxury expenditure? Support your opinion by arguments.

3. Is it of any consequence to society how an individual spends his income? Should society interfere with a man's liberty in spending money?

4. What advice would you give your neighbour to help him spend his money in the best possible way?

5. What is an economic "waste"? Do you think expenditure on luxuries should be forbidden because it is a waste?

PRODUCTION

PRODUCTION

CHAPTER I

PRODUCTIVE EFFORT

§ 1. **Meaning of Production.**—Literally 'to produce' means 'to draw wealth forth' and it is in this sense that we use the word 'production' in economics.

Man himself can do nothing but draw from the crust of the globe the materials which are to be utilized. He can neither create nor destroy matter. He cannot produce something out of nothing. He can only appropriate things and make them more useful for the satisfaction of human wants. The rivers furnish fish for his sustenance, but it is his labour which draws them forth. The earth produces grass, grain, cotton, hemp and trees of various kinds, but it is his labour which gives them all the forms of riches.

'Practically, man does nothing but pull, push, lift, press, carry or otherwise mechanically force things into new forms or new places.' The muscular energy of his body aided by his intellect is the only factor of production which man can apply and this factor can operate only when there is some material to be worked upon.

In making a table out of a log of wood, the carpenter does not create matter anew. He merely changes the shape of wood to give it the appearance of a table, in which form wood becomes more serviceable. In preparing a shirt out of a piece of cloth, the tailor does not make any new matter; he simply transforms the cloth into a shirt thereby making it more fit to satisfy the want of a man. The

wood and the piece of cloth are already there. They possess utilities too, as they can be used as fuel or a bed sheet; but wood cannot be used as a table, or the cloth as a shirt before their transformation. Wood acquires utility of a table when the carpenter works upon it or by his effort he adds the utility of a table to the wood. Similarly, the tailor by his work adds the utility of a shirt to the piece of cloth. Each of the two workers *only adss extra utility* to the *existing material*. The same is true of any other workers. Production of wealth, therefore, implies creation of *utilities and not of matter*....He who adds utilities is the producer. His effort is the productive effort. And the result of this effort is the extra utility which the thing as finally made possesses over and above the utility of the material with which the producer starts work.

Utility is the attribute possessed by all goods, material or immaterial. But wealth, as the economist understands it, does not consist of all goods. It is made up of such goods only as have exchange-value. Hence production, in the technical sense of the term, means creation of such utilities only as have exchange-value.

There are **five kinds of utilities** which man creates to produce wealth.

1. *Form utilities.*—A man is said to create form utilities when he brings about a change in the shape or form of the original material so as to make it more fit for the satisfaction of human wants. For example, a carpenter only changes the form of a log of wood to turn it into a table. A tailor simply changes the form of a piece of cloth to make it into a well-fitting shirt for his customer. One can find innumerable instances of this nature. To cite a few more instances, clay is turned into bricks and earthen pots, metal is fashioned into coins and vessels, and timber is changed into furniture of all sorts.

This type of productive activity which is directed towards creating form utilities includes all industries, genetic, and manufacturing. In agriculture which is a genetic industry, Nature, not man, grows corn. To accelerate the activity of Nature, he simply arranges seed, water and soil in a particular way and with her help he brings about the transformation of water and soil materials into corn and adds form utility to them. He makes a small quantity of seed grow into a much bigger quantity. Similarly, in animal breeding, fisheries and forestry, Nature works and multiplies animals, fishes and trees, and man only creates form utilities by feeding, protecting or conserving them in order to reap a rich harvest in the end.

In manufacturing industries the efforts of man are directed towards changing the form and arrangement of raw materials so as to produce finished products that satisfy human wants. For example, hides and skins are changed into boots and shoes, cotton into piece-goods, jute into gunny bags, timber into furniture and so on.

2. *Place utilities.*—When men carry goods from a place where they are in plenty or wanted less to another place where they are scarce or wanted more urgently, they create place utilities. Generally an article is not consumed at the place where it is grown, mined, or manufactured; it has got to be taken to the consumer whose want it is intended to satisfy. Food grains and vegetables are not so useful on the fields where they are produced as in one's kitchen. Coal is more useful in the fire-place or in an engine than it is near the mouth of the pit. Japanese cotton piece-goods acquire more utilities in Indian markets, and the utility of Indian jute is increased in the factories of Germany. Place utilities result from activities and means of transport like rail, road, or aerial and sea transport. Extractive industries like fishing and mining present other examples where the wealth of

Nature stored in the earth or water is taken out for human use.

3. *Time utilities.*—Time utilities are added to an article when it is preserved or stored for use at some future date, because it will have greater use at that time than at present. This includes not only keeping goods in storage but also lending and borrowing, and speculating. Winter ice, if stored, becomes more useful in summer. Potatoes, apples and other fruits and vegetables stocked for supply during off-season are desired more and valued more. Food grains and cloth are usually kept by the merchants from the time when their utility is less until the time when their utility to the customer is greater.

4. *Possession utilities.*—This kind of transformation is said to occur when the article is not changed but the owner of it is changed. It is carried on by merchants and brokers engaged in retail trade. They do not change the form or the place of goods; they may not even own the goods. But they increase their utility by arranging an exchange between those who have little use for the goods and those who have a greater use for them. For instance, landed property and houses are generally sold through agents or brokers. Some of the state activities also create possession utility. All that wealth, which the state realizes in taxes from the richer people and spends on the poorer people in providing education, medical relief and other benefits, acquires greater utilities only by a change of possession.

5. *Service utilities.*—In addition to all the above-mentioned transformations of material goods, services form another class of utilities which are created by human efforts even without the presence of material objects. Personal services, for example, yield direct satisfaction to those to whom they are rendered. Acrobats. magicians, dancers and *madaris* (monkey-men), all of these please the audience by their

respective arts. In the economic sense, therefore, they are said to produce Judges, teachers, doctors, actors, soldiers, policemen and a host of others are producers. They do not increase the utility of material goods, but they surely increase immaterial wealth by protecting our life and property and by giving us health, happiness and comforts. Thus farmers and artisans alone, who produce tangible goods, are not producers, but all those also are producers who render personal services. In a word, anyone who produces wealth in the economic sense of the term is a producer.

Sometimes, though rarely, it so happens that a man makes effort to produce wealth, yet fails to achieve his object. In such cases the effort is said to be unproductive. The instances are, to sink a coal-pit where coal is not found or write a book that no one will buy. But even here it is true that in intention the effort was productive. But the efforts of all persons who either produce material objects or render personel services are productive, provided they satisfy human wants and are paid for.

§ 2. **More productive and less productive effort.**—Of greater importance is the distinction between more productive and less productive effort. Given the same quantity and quality of cloth, a tailor may succeed in stitching more shirts than another tailor. Similarly, a more skilful carpenter may make a greater number of tables than another in the same period of time. Thus evidently the effort of a tailor or a carpenter is more productive than the other. Similarly, compared with the efforts of artisans, those of a teacher, a doctor, a lawyer, a preacher, a soldier, a musician and a host of other workers may be more productive and therefore more remunerative.

For efforts to be more productive, it is necessary that they should be applied at the *right time*. In agriculture, for example, the main operations like ploughing, manuring, sowing and irrigating, etc.,

must be performed at the proper season and time, otherwise the crops will be poor. It is common knowledge that the prosperity of agriculture in this country depends upon timely rainfall which is not always received at the right time. Facilities for artificial irrigation do reduce the farmer's dependence on the weather and the seasons and make his labour more productive, but the agricultural operations even to this day are at the mercy of Nature, and man has so far not succeeded in timing his operations to her whims.

Again, if labour is to be as productive as possible, it should be applied at the *proper place*. 'Different soils and climates are adapted to the growth of different products. One district abounds in luxuriant pastures, another is calculated for tillage; in one country the sheep have the finest fleeces, in another country, where these animals have but a coarse and scanty covering, the earth supplies abundant quantities of cotton.' Ivory can come only from lands where elephants flourish. Jute can be grown only in Bengal. Tea thrives best in Assam and sugarcane in tropical or semi-tropical countries.

Time is more difficult to deal with than place. We cannot change time, but we can change place if it is unfavourable. If we do not choose to stay on the spot where we are born, we may go to some other place where we expect our labour to be amply rewarded. But the love of home is so strong that few countries, even though they be worst in respect of physical features and climate, are ever completely abandoned. Tibet and Rajputana have their scattered inhabitants who are content to live in their motherland and develop its industrial possibilities to the best of their foresight and ability.

EXERCISES

1. What is meant by *Production*? Name the various ways in which utilities are created.

2. 'Man can only produce and consume utilities.' Discuss. What light does it throw on the question as to how far domestic servants and shop-keepers can be regarded as producers of wealth?

3. Are the following producers? If so, what kind of utilities do they produce?

An agriculturist; a fisherman; a doctor; a student; a soldier; a grain-merchant; a truck driver; a tax-collector; a beggar; a thief; and a tennis player.

4. Comment on the following statements:—

(a) The shepherd who rears the sheep thereby makes the transformation possible from matter in the forms of grass and herbs to matter in the form of wool, that is, into something more useful to the spinner.

(b) All those concerned in the collection, transport, sale and distribution of goods are producers of wealth.

5. How do you differentiate between less productive and more productive efforts? What economic significance do you attach to this distinction?

CHAPTER II

REQUIREMENTS OF PRODUCTIVE EFFORT

§ 1. **Land, Labour and Capital.**—Having understood the meaning of ' productive effort,' the next question that naturally arises is, ' Upon what does this effort depend? '

To begin with, take the simple case of a primitive man depending on hunting for his maintenance. He requires three things to obtain his food:—

(i) birds and animals must be available;

(ii) he must exert himself or make effort to catch birds and animals; and

(iii) he should possess the weapons necessary for hunting.

In agriculture we need a plot of land, the effort of the farmer and seeds and implements necessary for cultivation. The requirements of a carpenter's job, likewise, are wood, his own effort and a set of tools and instruments. Thus all the activities of production are carried on with the help of three requirements, commonly known as factors of production, namely, Land, Labour and Capital; raw material and space supplied by Nature are called *Land*, human effort made by producer *Labour*, and tools and implements *Capital*.

Organization and Enterprise.—The above discussion applies to productive activity of a simple and primitive type. With the development in the economic life of man, his wants have multiplied and become more complex, and as a result of it his production too has become intricate and complicated. This development has brought into play two additional factors called Organization and Enterprise. Organization refers to the combination of the factors of production in right

proportion and their best utilization, while enterprise consists in taking chances of gain or loss in the productive activity. Both these factors have acquired great importance these days because of large-scale production, world-wide markets and severe competition among producers.

We thus see that there are five requirements or factors of production—Land, Labour, Capital, Organization and Enterprize.

§ 2. **Land and Labour as essential requirements.**—Of these factors of production, land and labour are called *primary* factors while capital, organization and enterprise are called *seconary* or *derived* factors because of two reasons: (i) No production is possible without land and labour or raw material and human effort, but production of a simple type can be carried on in the absence of capital, organization and enterprise. A person can pluck grass or collect wood without any capital (external aid), but grass or wood and also man's labour to work upon these raw materials must be present there. It can likewise be pointed out that tables cannot grow out of wood without a carpenter's effort, nor can a carpenter make a table without wood or other raw material supplied by Nature. (ii) Capital, organization and enterprise are merely different forms of natural gifts and human effort. Capital is the result of man's past labour on land; organization is a special form of his activity; and enterprise depends upon labour and capital.

The discussion of these factors now follows in detail.

§ 3. **Land.**—In its narrow and popular meaning land is equivalent to the surface of the earth, its area and location. In its wider and scientific meaning it *includes all the materials and forces which man obtains from Nature* without labour, such as soil, mineral wealth, wind and water-power, mines and lakes, sunlight, natural electricity, gravity, cohesion, wild

animals, and similar other things. Land in this sense excludes human beings, domesticated animals, felled trees and artificial electricity upon which human efforts are expended.

Man cannot and therefore does not create raw materials. He finds raw material in its rudimentary form on the surface of the earth, below it, and above it. Almost everywhere he finds the treasures of Nature waiting for his labour to be exerted upon so as to be improved and utilized by him. Man takes as much advantage of bountiful Nature as he possibly can for his knowledge and capacity.

Trees and plants of different varieties are found *on the surface* of the earth. Man grows and develops them by arboriculture. There are numerous species of animals that are either hunted for their fur and meat or domesticated for food or transport purposes. Rivers big and small are used for irrigation or navigation, fishing, or weed and sand collection. No less important than all these is the *surface of the earth itself* which is used for farming or building and without which man can neither stand nor walk. *Below the surface* of the earth are found mineral ores from which are prepared innumerable things of daily use. From *above the earth* come rain and sunshine, air and its chemical elements that help man in various ways in his productive effort. All these materials are available to man as the gifts of Nature, for Nature supplies them without requiring any effort on his part.

§ 4. **Importance of land.**—Man is dependent upon Nature (land) for every need of his life. (i) It gives him air, light and water, without which life itself is impossible. (ii) Land provides man with plenty of space for carrying on all his activities. It is required not only for residence and habitation but also for constructing factories, railways and canals. On the surface of land and sea and even in the air Nature furnishes space whereon and in which he may rest

and move to harness and control her forces and conduct his productive processes. Mere space is often a source of great value particularly in overcrowded towns and cities where great difficulty is experienced in finding the necessary room for expanding business activities. (iii) From the soil man draws forth its nutriment in the form of food and raw materials; from the vast storehouse of Nature he obtains minerals which he uses for making tools and implements, and all sorts of jewellery to please his eye and vanity. (iv) In addition to all these services which Nature renders to mankind, she furnishes many things over the surface of the earth which man can obtain for a little effort on his part; for instance, he can get fish and pearl from water, animals, drugs and herbs from forest, and stone and wood from mountains.

Nature itself can produce in great abundance to satisfy the needs of man, but in all stages of productive effort human labour has been found necessary in some form or the other for the purpose of fitting natural gifts to human needs.

§ 5. **Labour.**—Labour is equivalent to economic effort undertaken partly or wholly with a view to some material gain. Thus Nature supplies her gift and man supplies his labour to carry on productive activity. Whoever labours makes both *physical and mental effort*. While sawing a piece of wood a carpenter appears to be performing his task mechanically and undergoing only physical strain. But let the saw deviate from the red mark on the wood and he is seen adjusting it on to it; similarly, no farmer ceases to think while he follows the team of bullocks in making a new furrow along with the other. Howsoever mechanical or automatic a task may appear, mental effort essentially accompanies it though it may be a small degree. A teacher, on the other hand, appears to do mostly thinking, a mental effort. But there is hardly a teacher who only thinks and does

nothing else by way of talking or writing on the blackboard which involves physical effort. Thus all labour is both physical and mental, though it can be said that while one kind of labour is more physical than mental, the other kind is predominantly mental.

Labour in itself is irksome. It is on the whole unpleasant to the ordinary man. He will not go on working for nothing. He does it because he is offered some inducement which enables him to satisfy his wants. A person's effort very strenuous though it may be, will not be called labour in the economic sense of the term unless it is intended to satisfy some of his wants by producing the required commodity, or to earn him a money income. A student's effort in playing the game of hockey, though requiring his entire energy, is not labour unless he plays as a professional player and is paid for. Effort of swimmers in rivers, lakes or tanks for the pleasure they derive from this activity is not labour; nor is the social service that is rendered to the poor or the diseased, nor the labour of love that is undertaken for the benefit of one's friends and relations, called labour. Wicked though it appears, the desire for material gain is the essential condition of an effort being called labour. As the term 'labour' is inseparable from the term 'labourer,' the former is very often used to mean the latter.

§ 6. **Capital.**—Land and labour are the two primary requirements of production. Labour can work upon the gifts of Nature but only with a very poor results. If a man be forbidden to use any kind of tools and instruments or external aids, he will undoubtedly produce but only by way of plucking fruits and berries and sometimes pouncing upon small animals and birds and killing them. Land and labour hardly sufficed to satisfy the wants of primitive men; how can they be expected to satisfy the present human needs which are numerous and com-

plex? The need for some external aids in the form of tools and implements has ever since been felt to increase the productivity of man's effort. And it is these material aids that are called capital.

Capital may be defined as all that wealth which man has produced and uses for the purpose of further production, and not for his enjoyment. When wealth is produced as a result of labour working on the gifts of Nature, it may be partly or wholly consumed. In case there is a surplus after present requirements have been satisfied, it is left over for future use and is called savings. These savings if utilized with the purpose of bringing in an income are capital. The intention of obtaining an income is essential before saved wealth can become capital. Cultivators usually retain a portion of their crops to be used as seed in the future; that portion of their crop, therefore, is capital. They also use other types of capital like the plough, the axe, the ropes and baskets and the team of bullocks all purchased with the money they have earned in the past.

§ 7. **Capital, Wealth and Money.**—Before a thing can become capital, it must have been wealth. Nothing that is not wealth can be capital. But because wealth is the result of human effort, the gifts of Nature which man receives without any effort cannot be capital. Air, water, sunshine and surface of the earth, therefore, cannot become capital.

Again, as capital is wealth used for further production, those forms of wealth like our dress, meals, dwelling-houses, books, parks and gardens that are used for our personal enjoyment and satisfaction and are not meant to be used as external aids in production, should not be called capital. Therefore only a section of wealth by virtue of its direct assistance in production can be capital. *Of course, all capital is wealth though all wealth is not capital.*

Capital should be distinguished from money. Capital is in the form of external aids—tools and instruments, seeds and manure, machinery and factory buildings, and the like. These are instruments of production. Money as coins or notes is not an instrument of production, though a producer having money can purchase with its help the instruments he needs. Money is thus purchasing-power and in terms of money the worth of things used as capital can be expressed, but money itself cannot be called capital.

Capital used in production brings an income. But it should not be supposed that any source of income is capital. Though the skill of a doctor or a lawyer is a source of income to him, it cannot be regarded as a form of capital.

§ 8. **Origin of Capital.**—Capital is in essence stored labour. Suppose a fruiterer, having a garden of his own, plucks fruits off the trees in the morning before he sells them in the market. If he had no external aid to help him he will have to climb up the trees and pluck the fruits that will be within his reach. But he will find that he cannot collect many in spite of serious attempts. If he works for a couple of hours and gets a branch of a tree—a bamboo will be very handy—fixes a cross-wood at one end and uses it in plucking the fruits, his efforts will be richly rewarded and he may even be spared the trouble of climbing up the trees. This simple device saves his labour and at the same time makes his efforts more productive. Yet this simple device is nothing but a material result of his two hours' labour and now, when he uses this instrument, it can be said that he is working with his past labour of two hours. Even big machines used in mills, factories and workshops represent stored labour of all those workers who contributed in any degree and at any stage to their production. Every tool or instrument or any form of

material help can be looked at from this point of view. For example, a farmer can be imagined to be ploughing the field not with the plough, but with the carpenter's skilful labour which was responsible for making the plough itself.

In conclusion it may be said that capital is the crystallised form of labour.

§ 9. **Forms of Capital.**—Capital can be classified as production capital and consumption capital, and also as circulating capital and fixed capital.

Production Capital.—All those capital goods that are used in direct production are called production capital. These may take the form of *raw materials* like seeds and manure in agriculture; cotton, wool and silk in textiles; and iron, brass, copper, etc., in metallic industries; or they may be used as *tools* and *instruments* needed at any stage in an act of production, like ploughs and tractors, looms and spindles, hammers and anvils; or they may be in the form of *buildings* and *sheds* in which productive activities take place.

Consumption Capital.—Consumption capital consists of that wealth which is consumed by a producer to maintain his health and vigour and not merely as a source of pleasure and enjoyment. It will thus include only the necessities of life and efficiency that enter the consumption of a producer of wealth.

All that an idle rich man consumes from day to day is consumption wealth; all that a farmer, a factory labourer or any other producer consumes mainly to avoid the loss of his health and efficiency is consumption capital. It is capital in the sense that it aids labour or human factor of production in the same way as money spent in buying and maintaining tools and instruments that help him. The wages paid by an employer for the work of the employees and utilized by them in consumption is really produc-

tive in the same sense as his money spent in buying tools and instruments with which the employees work. The difference lies in the fact that while money paid to labourers is indirectly productive through their consumption of it, appliances are directly productive, without going through the process of a similar act of consumption.

Circulating Capital.—Circulating Capital renders one kind of service only once, and includes not only raw materials and half or partly finished products but also finished goods which have not yet been sold to the consumer.

In a cotton mill, coal, cotton, spinning, weaving, and other machines and buildings, etc., are all instances of production capital. But cotton is such as changes its form from one process to another and in one form it renders service only once. Though remaining cotton all the time, it becomes by turns carded spools, yarn, warp and woof and cloth, etc. Yarn as yarn can be used for weaving only once; it cannot render the same kind of service twice. Coal that is used in heating the engine exhausts its utility in rendering that service only once. Such forms of capital like cotton and coal are called circulating capital.

Fixed Capital.—Fixed capital is that form of capital which renders the same kind of service over and over again. An engine generates power and runs the machines day after day and so does a spinning-mule spin month after month. A plough is used in ploughing the field many times before it becomes useless and an anvil serves a blacksmith for years on end. All these are instances of fixed capital.

The same capital goods can be both fixed and circulating capital according to the nature of service rendered by them. If an engine has been planted in a factory where it runs the machines day after day, it is fixed capital. But in the iron works where it was made, not to be used there for running machines but to

be sold away as a finished commodity, it was only a form of circulating capital like cloth in a cotton mill.

§ 10. **Land as Capital.**—As originally man got land or the earth's surface as a gift of Nature, it is treated as something distinct from capital which is the result of human effort. To the society or humanity as a whole, it continues as a gift of Nature, but it has ceased to be so to an individual or a group of individuals because he has to pay either in terms of labour, or money which is the result of his labour, to acquire a piece of land for his purposes of agriculture or industry. And therefore to him it is capital as much as raw materials, tools and buildings are paid for and are different forms of capital.

§ 11. **Functions of Capital.**—The main function of capital is to increase the productive of labour and this service is performed in three ways:—

(i) *It provides means of subsistence* to the producer during the period of production. Every producer is a consumer and he must maintain himself during the period when productive process is going on and he is waiting for the fruits of his labour. During this period his capital—consumption capital—maintains him.

(ii) *It provides raw materials* which will be turned into finished products. Seeds and manure are raw materials to the farmer while planks, nails, sandpaper and varnish, etc., to a carpenter. Semi-manufactured goods should also be included here, as yarn is raw material to a weaver.

(iii) *It provides tools, instruments and machinery* of all sorts to make production speedy, accurate and automatic. In addition, the means of transport like roads, canals, railways and ships, and places of storage like godowns and elevators are also capital as they help in productive activity.

§ 12. **Growing Importance of Capital.**—In primitive days there was practically no capital what-

ever. Men went into a forest and picked wild fruits. But it began to make its appearance as soon as they needed something to carry the fruits. Its importance gradually increased as society progressed. In its primitive stage, agriculture hardly required any capital but now, in its advanced stage, a good deal of capital is needed in the form of cattle, tools and implements, farm-houses, wells, water-lifting arrangements, seeds and manure. Different industries use different kinds of capital. A small artisan's capital includes small quantity of raw materials, his small tools and implements, substances which he uses for his industrial operations, and an open or closed space where he carries on his art or craft. A manufacturer's capital includes his buildings, plant and machinery; his raw materials, his stocks of commodities and many fittings and fixtures. There are other important forms of capital such as railways, roads, canals, bridges, yards and public buildings which are immensely increasing the productive capacity of land and labour. Thus capital to-day is the most important requirement of productive efforts and its use is being largely increased with the growth of industries.

In the Nomadic ages of man, land was the prime factor; in the Pastoral and Agricultural ages, labour was the chief factor which worked in conjunction with land; in the modern Industrial age, capital is the most prominent.

Distinctive Features of Land, Labour and Capital

§ 12. **Land.**—(i) Land is the original and essential factor of production because land existed before any other factor came into being and it is indispensable for every type of productive effort.

(ii) Land being inert, it acts as a *sleeping* partner. Land by itself cannot actively produce any wealth. It provides the base on which labour works.

(iii) Land is *limited* in quantity. Neither the area of the space nor the amount of natural forces at any place can be increased or decreased by human effort.

(iv) Land has *no cost of production* because it is a free gift of Nature and also because it is limited in quantity. Because man cannot produce it, the question of its cost of production does not arise.

(v) Land *does not wear out*. It is indestructible. The action of the geographical agents of change like wind, water and sunshine only transforms or transports certain portions of the earth's crust; it does not destroy it.

(vi) Land is *immobile* and it cannot be shifted from its location. No plot of land can be removed from where it stands nor can the heat, light and rain received by one plot of land be transferred to another.

§ 13. **Labour.**—(i) Labour is an *essential factor* of production. Things like trees and vegetables can grow in Nature and wild animals can breed and multiply by themselves, but this natural growth or multiplication is not termed production. For productive activity the presence of labour is indispensable, as only human beings can produce. For instance, a cow gives milk but it is the milkman who produces milk.

(ii) Labour is *an active partner*. In every form of production it is labour that acts upon land and draws wealth forth (out of it). Land yields but labour draws, extracts or produces. Always it is man's labour that works upon the raw materials supplied by Nature.

(iii) Unlike land, its *supply can be increased or diminished*. All those changes that bring about the growth or destruction of population or increase and reduce human efficiency result in the increase or decrease of labour.

(iv) Labour is *perishable*. It wears out quickly due to fatigue, disease, accident and death. Labourers

cannot work incessantly. They need rest and repair or feeding. Overwork and under-nourishment not only wear out but break them.

(v) Labour and Labourers are synonyms. Labour, therefore, grows or can be reproduced because labourers increase in number due to growth of population. As labour is reproducible, *it has a cost of production*. This cost is made up of the sacrifice and expenses involved in bringing up, education, training and maintenance of the labourers.

(vi) *Labour is mobile*. Labourers can move from one place to another or one occupation to another if conditions of work and remuneration justify such a change.

§ 14. **Capital.**—(i) Capital is a *derived* or *secondary* factor of production because it is only a form of the past wealth produced by labour. It is crystallized labour.

(ii) Capital is an *aid to production*. It serves as a tool in the hand of labour. Of course it helps labour to produce more than what labour can produce without it, yet its position is that of auxiliary to labour.

(iii) Its supply can be *increased and diminished more quickly* than that of labour. A growth in the earning power of people and the facilities for savings and investment lead to an increase of capital, while fire, rain, locusts, earthquakes, wars and other agents decrease and destroy it.

(iv) Capital *wears out* quickly. Circulating capital is exhausted in a single use though fixed capital serves longer. But it also suffers from wear and tear with every use and thus loses value (depreciates) and needs repairs.

(v) Capital *has a cost of production* because savings, which lead to capital, are the result of past effort and sacrifice. And, of course, every form of capital has its value that can be expressed in terms of money.

(vi) *Capital is highly mobile**—much more than labour. It moves in enormous quantities from one end of the world to another and from one occupation and form to another at even slight inducement in the form of higher income.

§ 15. **Relative Importance of Land, Labour and Capital.**—(i) *On the basis of priority of existence* :—It has been noted that Land and Labour are the original and primary factors as in the absence of either of them no economic activity will be possible; and in this sense they may be considered as more important than capital which is a derived factor and serves as an aid to production. Out of Land and Labour, the former may be judged as the more important because in the absence of land even labour cannot exist. Thus Land tops the list in the scale of importance followed in order by Labour and Capital.

(ii) *On the Basis of Productivity*.—The above positions of the factors are not decisive. The real importance of these factors to a producer will not depend upon whether land came into existence before the rest, but upon the part played by them in the productive effort he wishes to undertake. A farmer may still attach the greatest importance to his plot of land, but a factory-owner will consider capital to be of utmost significance to himself. And, in fact, the real importance of a factor can be judged only with reference to the type of production in which it is employed.

(a) *Agriculture*.—In agriculture land enjoys decidedly the most imporant position. Not only is the worth of land highest of all the factors, but in the creation of utility, land (Nature) plays the most important part. The farmer's (labourer's) function is to assemble together the required seeds, manure, irri-

---

* For mobility of labour and capital, see *Distribution*.

gation water and other forms of capital on a plot of land and then leave the growth of crops to Nature. Thereafter he is reduced to the position of a mere supervisor, to correct or improve upon things if all does not go well with farming. If Nature is propitious, he gets bumper crops; if she is adverse, the floods, drought, hail, frost and other calamities ruin him. Every farmer in India knows to what extent his prosperity and adversity depend upon Nature.

(b) *Fishing, Lumbering and Mining.*—In these extractive industries land does not enjoy the greatest importance. Production here consists in extracting or taking out the wealth stored in Nature's reservoirs like rivers, seas, forests and mines. Taking for granted the stock of these materials in their respective places, the efficiency of production will depend upon the degree to which human labour succeeds in taking them out. Thus Labour comes to play an increasingly more imporant part. Of course, a fisherman will require his fishing-tackle, and a lumber his axe and wrench, but these forms of capital are of minor importance as compared to his labour. In mining, no doubt, capital (machinery) is needed in relatively greater quantities, yet the importance of labour remains supreme.

(c) *Manufacturing Industries.*—In manufacturing industries like cotton, jute, sugar and iron mills, the place of honour is occupied of Capital. Only a small space is needed for factory site and thus land becomes a factor of least importance. Situation of the factory is of great consideration but situation is dependent on means of transport and communications (a form of capital). Labourers are employed in thousands in these factories, and they have to be very skilful workers too, yet in the supply of huge and varied raw materials, machinery and tools of all kinds, and the construction and maintenance of buildings

and stores, capital plays the most important part. Really speaking, in the case of the factory production the rôle of the factors of production is reversed as compared to agriculture: in agriculture land plays the leading part followed by labour and capital but in manufacturing industries capital plays the most important part followed by labour and land.

§ 16. **Organization.**—It has been pointed out that for efficient production capital is also a necessary requirement in addition to the two original factors, land and labour. Howsoever small a business, three factors—land, labour and capital are sure to be employed there. A neighbouring carpenter is seen hiring one of the municipal shops. He buys planks, nails and screws, paint and varnish in the local market. He engages a youngman to do odds and ends in his shop and to help him all day long. He has got a set of tools that are required in making the tables in which he specializes. He himself works hard in his shop and usually earns a descent living. To him, the shop is land; planks, nails, varnish and other stuff, circulating capital; and tools fixed capital; and the services of the youngman and his personal effort, labour.

On looking a bit more closely a difference is noticed in the type of labour which the youngman is doing and that done by the carpenter himself. The youngman works as directed by the carpenter who decides the plan of his work. His interest lies in working for a few hours under the carpenter's guidance and earning his monthly wage. The task of the carpenter is not so simple. His interest and responsibilities in the business are much greater. He controls and directs the entire business from the start to the finish, from the planning of production to the sale of the finished articles. In short, he organizes and in his capacity as an organizer performs the following functions.

Functions of an Organizer

§ 17. **Functions of an Organizer.**—(i) *He studies the market* to ascertain the scope for his business and the tastes and means of the consumers whose requirements he intends to meet.

(ii) He *fixes the size of his business*, that is, decides on the quantity of the finished commodity that he proposes to prepare in the course of a week or a month.

(iii) He arranges for the *purchase of raw materials and tools and instruments* required in his business. He will compare the prices of these requirements at various sources of supply and manage to purchase them at the lowest possible price.

(iv) He *organizes labour* or determines the number and quality of labourers to be employed, judges their efficiency, allots them tasks according to their capacity, and supervises and directs their work.

(v) As a result of changes in the styles and fashions of the customers he *introduces changes in the process* of production or begins to produce entirely new varieties of articles.

(vi) He has to arrange for the disposal and *marketing of the finished articles*. He considers the prices that other carpenters are charging for similar commodities; also the price which he should fix for his goods; and determines the market where he can sell them at the highest profits to himself.

§18 . **Need of Organization.**—Just as land and labour can achieve little without capital, so will do all the three working together unless they are in effective cooperation. An agency is required to coordinate their functions and to develop them to the best advantage. Even under elementary conditions some degree of organization is essential. The peasant proprietor, who owns his land and his tools and cultivates with his labour and that of his family, needs

organizing ability to get the best results. Possibly, he has to see that the various factors are combined in the right proportions and at the right time; that the work in the fields is done in appropriate order; that each worker possesses the necessary amount of capital to work with; and that each is given a fair proportion of work to do in order that it may not overlap that of others. Except in such a rare case as this, the various factors of production are generally not found in one pair of hands. One man may own land but possess no capital or be incapable of doing work. Another may have capital but own no land nor possess sufficient power to work; while a third may possess neither land nor capital, but a strong body or skilful hands or sharp intellect. Some one is required who will bring them together and combine them in such happy proportions that the maximum of wealth may be produced at the minimum of outlay. To the man who performs this valuable service the economist gives the name of organizer or business manager. Conditions now have changed considerably. In modern industry raw materials may come even from the ends of the earth; workers may be recruited from many districts; while most of the capital may flow in from numerous investors belonging to every grade of society; yet the organizer stands behind them all. To him must assemble the three factors of production; to him must all look for supervision, direction and control; to him must be entrusted the onerous and important task of combining them in proportions that will yield the maximum of output with the minimum of outlay.

In short, the strength of land, labour and capital lies in their union under one management, which will take the lead in coordinating them to produce wealth and also endeavour to obtain from them the best results.

§19. **Importance of Organization.**—The importance of organization is increasing along with the

forecasting the change in taste and fashion, in the price he will have to pay for raw material, and in the improvement in the means of transport that may open new markets for his goods or face him with competition from unexpected quarters. All these conditions will affect his expenses and the price that he will realize by selling the article. He may succeed in clearing big profits or may suffer heavy losses. This element of risk is involved in every business. In some it is less, and in others it is more. But as long as production is carried on for others and for distant places, this uncertainty must remain. This uncertainty in business involves the risk for enterprise, and he who undertakes the risk, or the liability to make gains or suffer losses, is called the enterpriser or entrepreneur.

§ **20. Need of Enterprise.**—Enterprise has all along been a necessary factor of production. Unless producers are willing to expose themselves to unforeseen circumstances over which they cannot possibly have control, they cannot undertake the production of any commodity. The world must have been the poorer by the loss of many enterprises which have proved to be of great benefit to it, if every man were deterred by the uncertainty of future course of events from running the risk of those enterprises. In modern industrial production the need for enterprise is great and it will grow still more as trade and commerce become more and more world-wide. The element of risk involved in business has become so great that it is regarded as a special responsibility which all and sundry cannot undertake. It has come to be a contribution made by a class of people who make it their special business. These people are capitalists.

§ **21. Enterprise Falls on Capital.**—None can take risk unless he has some capital at stake. Labourers who work for a period and get their wages, risk nothing in case a business fails. Even the high-class

supply of raw materials at a cheaper rate; to carry on experiments with a view to introduce a new process in place of the old one; to adopt the best and most up-to-date machines in order to increase production; to employ canvassers and agents and to advertise to push the sale of the finished commodity; all these and allied functions are undertaken by organizers who must be efficient in them if they desire to prosper in their business. This need for efficient organization was never felt as urgently as under the modern conditions of production. Only one in a thousand men is gifted with the ability, spirit and power to work as an efficient organizer. First-class powers of organization are amongst the rarest of human gifts.

§ **22. Enterprise.**—Enterprise means risk-taking He who invests his capital in a business exposes it to chances of gain or loss. Everyone hopes to make a profit out of his undertaking but there are so many factors of uncertainty that he can never be sure of the fruits of his effort. He takes these chances or undertakes enterprise.

Every business involves risks as forecasts and estimates of production and sale have to be made, and these estimates may ultimately prove correct or wrong and may lead to gains or losses to the entrepreneur. He has to make a choice of the place, the article, and the scale on which the article is to be produced. He has to estimate the quantity of the article produced by others and the probable consumption of it. He has to see whether, in addition to the present extent of the market, new areas can be served. He makes an estimate of all the expenditure he will incur in producing the commodity and the price he will be getting for it. But all these are only estimates, the attempts to forecast or to foresee what trend the events will take in future. And he may fail in this forecast. Even if he succeeds in fully understanding the present circumstances, he may commit mistakes in

development in modern industrial production. In early stages of economic life, when people had few wants and satisfied them with personal labour and crude capital, there was little scope for organizing ability. The raw material necessary for making the finished commodity was produced by the individual who also knew exactly how much of a thing he wanted. Fashion had little influence on individual consumption which was dictated by custom and varied little over long periods. The tools and instruments used were locally made and the coordination between a few simple tools and family labour was not difficult to bring about. Those people, who produced more articles than they could consume, sold away the surplus in the village or at a fair in the neighbourhood.

Since those days the nature of production has undergone vast changes. Though there are individual producers, yet even they do not confine their productive activity to the satisfaction of their personal wants. Usually they produce what others desire and others produce the article they themselves want. The necessity of clearly knowing the quantity and quality of the articles that will find purchasers is great. The same article is being produced by numerous people at different places. To know at what price they will be selling the article is essential to a producer. Due to means of cheap and quick transport it is possible for a producer to satisfy the wants of consumers living at distant places. These wants may change and do change much more quickly than they used to do in former times. Custom is giving place to fashion which is much more variable. Even in actual production of the article, vast capital and hosts of labourers are employed. It makes the task of the organizer much more difficult.

To find out which man is best fitted for particular task; to assign him that task and make him do most of it; to be on the lookout for the sources of

labourers, who manage the actual production of the finished article, are specialists in management alone. They receive a fixed payment and have no further interest in the prosperity or loss of the business. A landlord lets his plot of land on hire to a farmer or a factory-owner at a certain rate of rent which has to be paid whether business is good or bad. The landlord will realize his fixed rent irrespective of the fate of the business. He, therefore, does not take risk. It is the capitalist who employ huge amount of capital, that bear the real burden of loss or appropriate rich gains. They risk their capital and consequently undertake enterprise. If they make profit, their capital investment increases; if they suffer losses, it is reduced. Thus the impact of enterprise falls on the capital of the entrepreneur.

§ 23. **Double Function of the Enterpreneur.**— The function of a modern enterpriser is twofold. He is the *captain of industry* and also the great pay-*master*. As the captain of industry, he backs his brain, his luck and judgment, and undertakes the risk. As the great paymaster, he distributes remuneration to each factor of production. To the owner of the land he pays rent; to the capitalist, interest; to the managers and clerks, salaries; and to the huge army of labourers, wages; and last, though not the least, whatever is left goes to him as a remuneration for the risk which he shoulders, for he cannot be expected to apply his energies and abilities for nothing.

EXERCISES

1. What is meant by the term 'land' in economics? To make your meaning clear give examples. Consider whether the following can be included in land:

Agricultural land of old and advanced countries; fishes preserved in tanks; games and trees of preserved forests; fruits and flowers of public parks; mountains; coastline; geographical situation of India; and seaports.

2. Explain the following definitions of land:

(a) By land is meant the material and the forces which nature gives freely for man's aid in land and water, in air and light and heat.

(b) The word *land* includes the whole of animate and inanimate nature (exclusive of human beings only).

3. Estimate the importance of land as a factor of production. Is land the same thing as free gifts of nature? Can you use the word 'nature' to mean land in the economic sense of the term?

4. Define 'labour.' Differentiate between labour and a labourer. How far do you agree with the following definition of labour?

'Labour is the exertion of body or mind which is not undertaken solely for the pleasure of the work itself but rather with the purpose of obtaining an income either in cash or in kind.'

5. How do you distinguish between land and labour as factors of production? Show that the use of one is necessary for the other in producing wealth.

6. Expalin clearly the meaning of the term 'capital.' Consider the part it plays in production. Under what circumstances can land be brought within the meaning of the term 'capital'?

7. Trace the origin of capital and also the growth of its importance in modern times. Discuss how capital differs from money and wealth. Do you see any difference between capital and capital goods? Illustrate.

8. Distinguish between

(i) Fixed and circulating capital.

(ii) Production and consumption capital.

(iii) Capital and land.

(iv) Capital and labour.

9. What is meant by 'organisation'? Why does the necessity of organisation at all arise? Estimate the importance of organisation in production.

10. Discuss the following statements:

(a) Land, labour and capital working alone can do little. In their union is strength.

(b) Only one man in a thousand has the ability, spirit, and power to direct an army of men with a variety of interests through a maze of difficulties.

11. What are the functions of an organiser in modern industry? Can you name any business that involves no risk? How far do you agree with the following?

'Planning ahead and working for the future were never so important as they are now.'

12. What is meant by organization? Suppose you were asked to organize cotton handloom industry. How will you do it.

CHAPTER III

LAND IN INDIA

Economics plays a very important part in the life of individuals and also of nations. Most of the activities of man can sufficiently be explained as being based on economic considerations. A major portion of the working hours of a man's life-time is spent in dealing with the 'ordinary business of life.' And on the degree of success with which the problems of this business are tackled, depend the prosperity and happiness of mankind.

The material well-being of Indian people like that of any other nation depends upon several factors, a study of which constitutes a well-recognized science known as **Indian Economics.** This science only seeks to inquire into the nature of India's present economic condition and attempts to investigate into the means and methods of improving it. The economic questions arising in Indian setting, with Indian temperament and Indian outlook, need a special angle of study and probably a particular line of approach.

Human beings are free to think, yet not so free to act. Nature with its vast resources determines the channels through which the human activity will be directed. Productive activity is possible only with the help of Nature which provides the basic raw materials on which human beings act. If Nature has been bountiful in showering its gifts on a nation and has also shown favour by not placing too difficult obstacles in the way of their exploitation, man's economic efforts are richly rewarded and he leads an easy, prosperous and happy life. But in the face of natural odds the struggle for the control and exploitation of its resources becomes severe and man has to lead a poor and strenuous life. Luckily, Nature has

been exceptionally kind to India and has provided her with almost all the important raw materials and other resources necessary for the nation's economic development. Still if Indians are poor and their material advancement has been slow and fitful, the answer should be sought in the domain of human endeavour.

§ 1. **Extent of Land.**—India is about 2000 miles in length from north to south and about 2500 miles in width from east to west. It covers an area of nearly 1·8 million square miles, of which about 1·1 million square miles are under British administration and 0·7 million square miles under Indian States. The vastness of our country may be judged from the fact that British India alone is about one-third the size of the United States of America, and the whole of India about half the size of Canada. India is a world in herself, being fifteen times as large as Great Britain. She is equal to the whole of Europe excepting Russia. The Presidency of Bombay can accommodate Spain, the United Provinces Italy, and the Punjab the whole of the British Isles.

§ 2. **Geographical Location of India.**—India enjoys an excellent situation, having on her northern boundary the huge Himalayan wall which protects her from the cold winds of the Tibetan plateaux, and on her north-western and north-eastern boundaries the offshoots of the mountain barrier which shield her from unfriendly influences across the borders. Standing at the head of the Indian Ocean and almost at the centre of the Eastern Hemisphere, she occupies a position which is extremely favourable for international trade. She commands trade routes that radiate in all directions. They lead to Europe and Africa on the west, to Ceylon and Australia on the south, to China and Japan on the east, and to Afghanistan, Tibet, Nepal and Bhutan on the north. She has an extensive coastline and, if she comes to own what she needs, a suitable mercantile marine, she stands quite a fair

chance of becoming one of the principal carriers of the world's trade.

Four Natural Divisions of India

On the basis of structure, soil, climate and rainfall, India can be divided into four well-marked divisions.

§ 3. **The Himalayan Region.**—The Himalayas which form the chief physical feature of this region make a natural impregnable barrier just to keep away the enemy. They intercept the heavy monsoon winds, thus making them yield their moisture either in the form of snow to cover their magnificent altitudes or in the form of torrential rains to drench the parched plains down below. They are clothed with forest trees that form a sort of reservoir for the enormous deluges feeding the rivers of Northern India. The forests are the source of enormous timber, fuel and fruits. Lower in the Terai are found dense jungles abounding in wild animals of numerous species and also a variety of bamboos, grasses and trees which supply the raw material for industrial products like paper, *katha*, turpentine, rosin, tanning and matches. The Assam hill-slopes are noted for high-quality teas, while the Kashmere valley grows fruits and rice in abundance in addition to possessing one of the very best, if not the best, of natural scenery in the world. Considerable mineral wealth is reported to lie hidden deep in the bowels of the Himalayas, but that does not seem to be fully justified. Copper was mined in olden days, as the copper industry of Almora and the neighbourhood supplies ample proof, but the output must have been poor because it has since then been abandoned. Land for agricultural purposes is scarce and has got to be prepared by cutting down the side of the hills and embanking the edges of the rivers. Apart from the fortunate valleys where some stretches of land are available in the fields like those of the plains, as a rule the river bank and terrace cultivation is carried on.

Any deficiency in the rainfall is made up by an interesting system of irrigation which consists in making the water of the neighbouring mountain streams flow over the terraces or steps of the fields one after the other. Land is not fertile and the soil very thin which yields rice, *madua* and a few pulses. The greatest problem of this region is the transport of men and goods. Railways are unheard of and the roads few which cost huge sums in constant repair. Though on the main roads the motor buses have begun to ply, the popular means of transport are the hill-men or the beasts of burden like ponies, sheep and goats. The one aspect of economic life in which this region is rich is the possibility of huge development of hydro-electric schemes from the rivers which have numerous falls on their courses through the mountains.

§ 4. **The Indo-Gangetic Plain.**—It is a vast expanse of level surface thickly floored with the most fertile alluvial soil brought down by the Indus, the Ganges and the Brahmaputra. The Thar Desert and the Aravali Hills divide it into two distinct regions, the Indus Basin and the Ganges Basin. The former is practically dry and sandy, while the latter moist and water-logged. These features reach their extremes in Sind and Thar on the west, and Assam and Bengal on the east.

The region may well be proud of having the holy Ganges gliding through its extensive sheet of alluvium. 'There is not a river in the world which has influenced humanity or contributed to the growth of material civilization or of social ethics, to such an extent as the Ganges. The wealth of India has been concentrated in its valley, and beneath the shade of trees whose roots have been nourished by its water the profoundest doctrines of moral philosophy have been conceived, to be promulgated afar for the guidance of the world.'*

* Imp. Gaz., Vol. I, p. 26.

In no part of the world is to be found such a fine network of irrigation canals as in this region, now having the world-renowned Sukkur Barrage which speaks volumes of the wonderful achievements of man in his efforts to turn the dry and desolate tracts of land into populous spots of smiling plenty.

This region has always been known for its inexhaustible riches, so that it has attracted from time to time ambitious people who wanted to enjoy its bounty either through the sword or through the scales. Even to this day it is economically the most advanced region in India and has the bright prospects of becoming in future one of the coveted industrialized regions of the world. The irrigated tracts of Sind and the famous black cotton soils are already producing rich crops of fine cotton; the moist tracts of the United Provinces and Bihar are growing considerable quantities of excellent sugarcane; the hilly tracts all over the plains are raising abundant amounts of oilseeds, and the wet parts of the Gangetic delta yield the best quality of jute in large quantities. The animals also furnish various kinds of raw hides and skins. All these products can supply enough raw materials for a large number of mills and factories. The south-eastern section of the region may well be described as Nature's vast storehouse for minerals such as coal, iron, mica, manganese and others which may be filled into the blazing furnaces and shaped into cheap and up-to-date implements and machines. The snow-clad Himalayan mountains containing numerous rapids of the streams running through them offer immense possibilities both as regards the quantity of hydro-electric power that can be generated and the cheap rate at which that power can be transmitted over long distances and made available in all parts of Northern India to drive modern machinery. The hard-working class of idle cultivators can supply the necessary amount of cheap labour. And, above all,

the unusual flatness of the entire region makes the land wonderfully suited to the easy and cheap construction of railways that can be made to traverse the whole region so as to knit together its isolated and scattered parts into one solid unit.

Not commercial crops alone, other agricultural products also in which this region specially abounds can start quite a good number of mills and factories. Agriculture has been the chief industry of this region which has an area nearly one-third of the area of the whole country and supports a population almost twice as big as that in the rest of India. The area already under cultivation may be increased by cutting down forests, filling the marshy tracts, draining water-logged areas and reclaiming eroded lands.

When Nature is so lavish in her gifts to this region, it is only up to man now to turn this bright visionary dream of industrial development into a glaring reality full of life and activity.

§ 5. **The Deccan Plateau.**—In contrast to the alluvial plains of the North, this triangular tableland has a thin layer of the upper soil over the rock-bed of which it has its foundation. By ' far the oldest region in India, it is essentially rocky and possesses crystalline soil ' capable of producing minor crops like barley, jawar, maize and ragi and a few oilseeds, specially the groundnut. The Nilgiris supply tea and coffee and forest teak, sal, ebony and sandal. Its most fertile section is the north-western black cotton soil which is the gift of the volcanoes and the home of cotton production. It feeds the cotton industry centred at Bombay and Ahmedabad which are responsible for about 95% of Indian output. Due to the hard crust of the earth and its unevenness the construction of canals is difficult and expensive, and building of the roads and railways is also not easy. The mineral deposits of coal and iron are not as rich as those of the Gondwana fields though manganese is found in abundance in C. P. and nearly

the entire output of gold comes from Mysore. But the Western Ghats can boast of the biggest Indian hydro-electric schemes which supply power to Bombay City and suburbs, its mills and trams, and the railway system between Bombay and Poona.

§ 6. **The Coastal Strips.**—These long strips of land on the west and east of the Deccan Plateau lie between the Ghats and the sea. The strip on the Malabar Coast is known as the Western Coast strip and that on the Coromandal Coast, the Eastern Coast strip.

The greater part of the Western Coast strip is covered with coconut trees and a great many villages are full of groves of betel-nut palms, pepper and cardamoms. The alluvial soil of Gujarat makes splendid garden-land, while its black cotton soil yields the famous Broach cottons, the finest in India. The Konkan tract receives abundant rains and produces rich crops of rice. The electric power generated on the Ghats provides a great impetus that may lead, in the near future, to a phenomenal flotation of new industrial concerns of almost every description. It is quite possible that the indigenous handicrafts like handloom weaving, silver-ware and brass-ware making may dwindle into insignificance with the growth of modern industries. The coast strip not only forms an important outlet for the products of Southern India but also enjoys, on account of its situation on the western sea-board, an enviable position that keeps it in touch with the principal markets of the world.

The Eastern Coast strip is comparable in respect of fertility to the Indo-Gangetic Plain. Paddy occupies the largest cultivable area; but cotton and sugarcane are by no means inconsiderable crops of the region and are receiving close attention at the hands of the local agricultural authorities. Good canals have been constructed; the area under cotton is increasing and efforts are being made to produce better strains of

cotton suited to different localities. It is being recognised by and by that this strip of land forms one of the most suitable parts for the cultivation of that variety of sugarcane which is deep-rooted and resuires very little water for its growth. The departments of Industries and Agriculture are rendering valuable assistance in the development of the sugar industry. Groundnut is on a rapid increase and is fast growing into a crop of great industrial importance. Jute being produced now in Northern Sircars, it has given rise to a few jute mills. Tanning is one of the principal industries of the region and there is considerable export trade in skins and hides. Shallow seas off the coast have flourishing fishing industry. A number of indigenous match factories are running on cottage lines. In addition to these, there are spinning and weaving mills, oil-mills, soap factories, rope-works and a few others. Arrangements have also been made for organizing the sale of the products of Madras cottage industries in European markets. Several places are receiving electrical energy from the hydro-electric projects that have been completed. A few projects are under construction and a few more are being contemplated. Such a wonderful progress as already made here cannot but augur a good future for the industrial development of this part of Southern India.

§ 7. **Climate and Rainfall.**—India stretches form 8° to 37° north latitude and the Tropic of Cancer passes through the middle of it. It is thus roughly divided into two belts, Indian peninsula which is in the torrid or equatorial zone and Northern India which wholly falls within the temperate zone. Naturally the peninsula is hotter and its mean temperature higher than that of the plains. Had it not been due to the equalizing influences of the neighbouring sea on its two sides, the plateau would have been a very hot tract. Northern plain, with latitudes varying

from flats a few feet above the sea-level to elevations 29,000 feet above the sea-level, includes within its borders every conceivable variety of climate, from the dry and hot semi-desert plains of Sind and the continental extremes of the Punjab to the damp and fertile lands of Bengal and the pleasant hilly vale of Kashmere. The climate differences are so great that at one period of the year the heat is unendurable, fills the whole country with deathly stillness and with only a few interrupting advances of blinding violent dust-storms followed by excessive outburst of rain, while at another the temperature is moderate, atmosphere calm and rains scanty.

§ 8. **Influence of Climate.**—No factor of man's environment exercises a wider influence on man than climate. It affects his food, clothing, shelter, physique, mind, habits, occupations and culture.

Nearly all food is furnished by plants which are influenced by climate more than anything else. Moisture and heat, two climatic factors, are essential for plant life. The actual produce of food depends on the amount and distribution of rainfall. Sunny weather in a region of heavy rainfall is a boon. Sunshine is required not only for the ripening of crops but also for flavour in fruits and flowers. The nice quality of fruits grown on the terraces of hilly countries like Nepal and Kumaun is due to the fact that the sun's rays are caught almost at right angles by the terraces.

Climate also decides the kind of clothing and shelter needed by man. Hot summers of India do away with the necessity of clothing except a scanty amount of it to cover his nakedness. Climatic differences are reflected in some of our provinces in the nature of the head-dresses used by the people of those provinces. The Punjabis with a turban on their heads stand in great contrast with their Bengali brethren without any head-dress whatsoever. The Punjab,

being hot, necessitates the use of *safas* so as to provide protection against sun-stroke, while Bengal, being damp and moist, obviates the necessity of a head-dress altogether.

Climate influences the type of architecture, the plan of buildings, and the material used in their construction. The frail mud-houses with thatched roofs in villages give all the shelter required against the fiery rays of the sun in summer, while pucca houses of stone, concrete or fire-baked bricks, and sloping roofs covered with thatch in towns are a necessary protection against low temperature and heavy rainfall.

Climate affects the physique and character of the people. A hot and moist climate brings weakness and fatigue after a little exertion. It produces disinclination to hard work and reduces the longevity of life by exposing the body to the attack of innumerable tropical diseases. The utter dependence of agriculture on the seasonal and precarious rainfall has made the cultivator fatalist who regard all calamities and mishaps as simply due to the wrath of the Providence and does little himself to improve his lot.

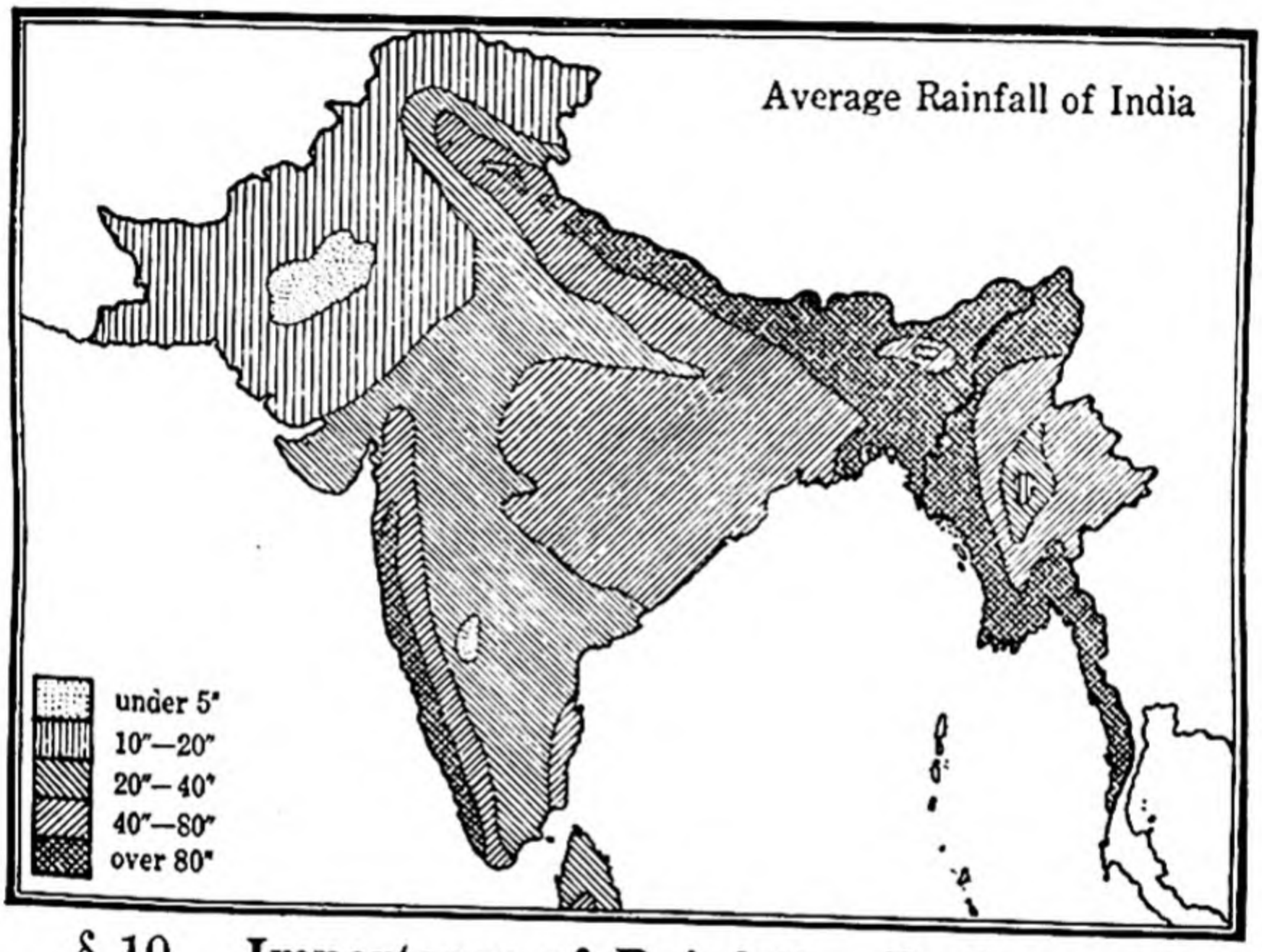
Climate moulds the habits of the people. Much effort is not needed in this country to grow food with the result that the people are ease-loving, indolent and unenterprising. In those regions of unfavourable climate where nothing could grow except in response to hard labour, people are sturdy, strong and laborious.

Climate controls trade and commerce as it localizes the growth of plant and animal products, and to a great extent decides the nature of the manufactured goods also. The moist climate of Bombay makes it a suitable home for cotton-spinning industry; and its clear climate with abundant sunshine and few cloudy days renders it specially fit for the Cinema film industry.

Lastly, climate accelerates or retards the progress of mankind. Civilizations were born in warm, temperate and sub-tropical regions and grew in cool temperate regions, while backwardness of the damp tropical regions is due mainly to the influence of the climate.

§ 9. **Rainfall.**—Of all the factors that enter into the Indian climatic conditions, rainfall is by far the most important. In May and June when air burns hot and the entire land-surface is turned into a blazing furnace with its torrid influence spread in all directions, people eagerly long for the welcome showers of rain that will cool the atmospheric furnace by drenching the baken brown surface of the earth. By July the *South-West Monsoon* which reaches every part of India in two currents, the Arabian Sea branch and the Bay of Bengal branch, is fully established over this country and is responsible for nearly 90% of the total rainfall. The amount of rain in Northern India decreases as one proceeds from east to west and also from north to south. Cheerapunji in the Assam hills receives as much as 472 inches rainfall annually while Baluchistan gets about 5 inches only. Thus rainfall also like the climate presents striking variations, though the average annual rainfall of India is recorded as 45 inches. Its distribution is marked by diversity in place and uncertainty in time. Places lying in the path of the monsoon receive much heavier rainfall than those outside it. In Cheerapunji rains burst in torrents. thereby causing irreparable *soil-erosion*. Fine particles of the soil, to which is due the fertility of the land, are carried away by the running water and deposited elsewhere. In Upper Sind the amount of rainfall is so deficient that recourse has to be taken to artificial irrigation from canals. Practically the whole of the rainfall of India is concentrated into a few months of the year and not spread over all the twelve months equitably. Most of the

rain that breaks out in downpours finds its way through the drains and rivers into the sea and is completely lost. A good deal of it is evaporated in the hot weather, thus leaving only an insignificant quantity that percolates into the soil and is conserved to be utilized in raising crops.



§ 10. **Importance of Rainfall.**—Perhaps in no other region of the world does the rainfall enter so much into every aspect of human life as in India. Here life is based mostly on agriculture, which depends for its very existence on the monsoon rains. Evidently, therefore, rains in this country mean the yearly salvation of tens of millions of people who live on the fruits of the soil. The poor and hard-working cultivator looks up to the sky for the welcome rain-bearing and life-sustaining cloud that supplies the necessary quantity of water for his crops and also adds to the productivity of his soil by bringing with it certain chemical substances which are said to be present in the atmosphere. Consequently, if

the rain is abundant, his crops are plentiful and he is amply rewarded for his labour. But, if the rain fails, it often leads to a severe famine involving the loss of thousands of lives. Even delay in the breaking out of the monsoon results in the wide prevalence of epidemics in the country. Not to speak of the rain, the slightest blowing of the western winds that dry up his fields makes the cultivator uneasy and nervous.

In a country like ours with a sharply defined rainy season, it is not the amount of rain so much as its proper distribution in regard to place and time, that is of vital importance. Bad distribution of rainfall over the various parts of the country has a far-reaching effect on the nature of crops grown, the extent of area actually cultivated, and the methods of cultivation in operation. Irregular distribution and uncertainty of rainfall throughout the year most seriously interfere with agricultural operations and adversely affect the prosperity of the country. If at one time of the year the rainfall is heavy, it drowns or washes away the standing crops and causes soil-erosion and water-logging. If it is scanty, it ruins the agricultural industry. It may also arrive earlier or terminate sooner, thus leading to partial or total failure of crops.

But it is not agriculture alone that suffers on account of unevenness and vagaries of our rainfall; trade, commerce and the internal peace of the country also are greatly affected, thereby causing wide variations in the income of the Government as well. The income is large if the rain is favourable. But if the rain is scanty the result is the financial breakdown and panic. It is for this reason that the framing of the Annual Budget of the Indian Government has been spoken of as a "gamble in rain." For several months in a year our country is on a severe trial on account of the peculiar character of our rainfall which

is not only seasonal but also uncertain and irregular. The summer monsoon is of vital importance to us and may well be described as the pivot upon which the whole of Indian life swings. By it India lives; without it there is starvation, misery and death.

The year in India may be divided into three seasons, the rainy season, the winter and the summer, each roughly of four months' duration. But the more important division is between the *Kharif* or the monsoon season extending from May to October, and the *Rabi* season comprising the rest of the year.

§ 11. **Soil.**—Congenial climatic conditions will bear out full results only when the country has good soils. This brings us to the importance of soils in India. Geologists classify the soils of this country into three main types:

(i) *The alluvial soil.*—In Northern India it occurs in Sind, Gujarat, Rajputana, the Punjab, the United Provinces and Bengal. In Southern India it is found on the coastal strips and in the Godavari, Krishna and Tanjore districts. Generally speaking, in North-Western India the soils are sandy, porous and dry. In Bengal the soils are more compact, less coarse and moist. The soils in the deltas and coast-strips of the Deccan are non-porous, clayey and of dark colour. Being rich in chemical properties and organic ingredients, the alluvial soils are capable of growing most of the *Kharif* and *Rabi* crops, and there are few soils in the world that can surpass them in productivity.

(ii) *The red soil.*—It is derived from rocks and is found in south-east of Bombay, Mysore, Madras, East Hyderabad,

Central Provinces and South Bengal. This tract is known as the crystalline tract and possesses rather a low fertility, but with irrigation facilities it can produce rice, maize, ragi and other inferior crops.

(iii) *The black cotton soil.*—It is the product of the decomposition of volcanic matter and derives its name from its dark colour and its suitability for the growth of cotton. It covers the greater part of Bombay, Berar, Western Hyderabad, Central Provinces and Central India. It easily absorbs and successfully retains rain water and is suited to the growth of cotton, wheat, jowar and other minor crops. Regur, by which name also it is known, is said to possess an almost inexhaustible fertility.

§ 12. **Forests.**—India possesses valuable natural wealth in the form of her magnificent forests whose character depends largely upon rainfall and elevation. The Himalayan region, Assam, and the Western Ghats which receive copious rainfall, are covered with evergreen dense forests of pine, palm, deodar, oak, sal, teak, bamboo and rubber trees. The Terai, the Central Highlands and the Sunderbans which receive less copious rainfall, have deciduous forests which yield sal, betel-nut, firewood, Babar grass for making paper, and barks of trees for tanning leather.

Forests cover nearly one-fifth of the area of British India. They are the property of the state, and yield a considerable net revenue to the Government, after meeting the expenses of the Forest Department. For administrative purposes they are classified as (i) Reserved, (ii) Protected, and (iii)

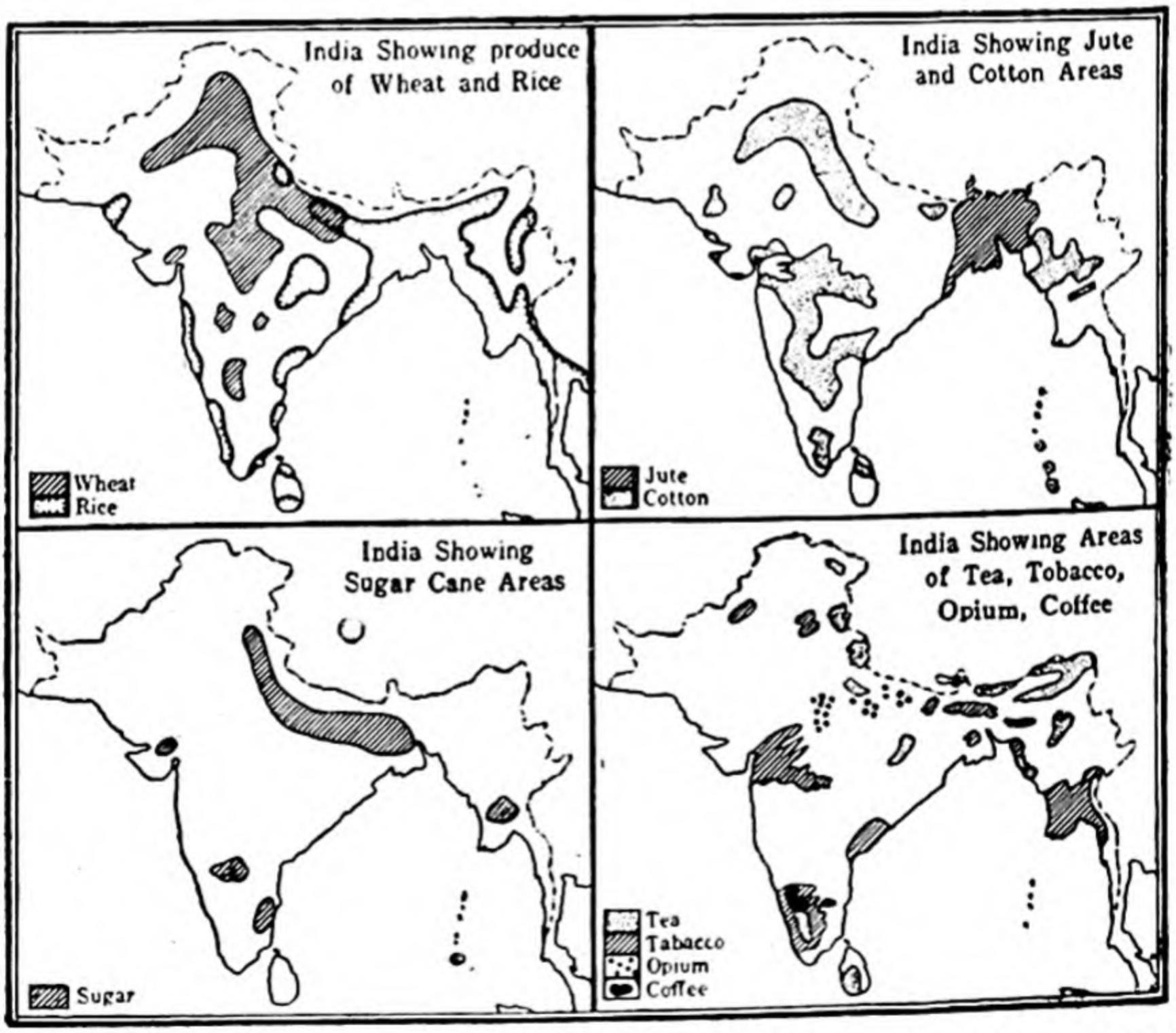
Unclassed according to the degree of control exercised by the Government over the rights of individual and public use. The object of forest administration is to protect the heritage of Nature against the rapacity of mankind and to improve the yielding capacity of trees. The Forest Research Institute of Dehradun is engaged in doing useful research work.

Benefits of Forests.—The reckless destruction of forests for centuries, the increase of population, the extension of cultivation, the multiplication of herds of cattle and the increasing demands for timber and firewood for railways necessitated the adoption of the policy of forest conservation by the Government in 1855. The Agricultural Commission (1928) has also stressed that a certain percentage of forests is absolutely necessary for agriculture. Forests are, in fact, the handmaid of agriculture. They supply the agriculturists with wood for fire and implements and with small timber for making and repairing houses. They provide fodder and also grazing grounds for their cattle. They provide work to a large number of workers such as woodcutters, sawyers, carters and others, offer employment to a good many persons such as carpenters, tanners, basket and rope makers, and several other artisans. More than a million and a half people of India get their livelihood in this way. They are a source of supply of raw materials to a number of industries like fir splinters for matches, sabai grass for paper, timber for cabinet-making, bark for tanning, and lac, rubber sap, cinchona bark, resin and catechu for their respective industries.

Indirectly, forests help in rendering climate more equable, preventing soil from water-erosion, producing a sustained and continuous flow of water in rivers by regulating the supply of water that feeds them, increasing the fertility of the soil by adding green foliage and by conserving moisture, checking

floods, breaking the force of winds, affording shelter to cattle, game and useful birds, and creating a healthy æsthetic effect upon the people.

Animals.—The extensive forests of India shelter a large variety of animals which are of no small consequence in an agricultural country like India. The most important of them are: (i) cows and buffaloes chiefly valued for milk, (ii) bullocks prized for plying carts and drawing water and ploughs, (iii) goats and sheep kept for meat, wool and manure. Other animals are horses, ponies, asses and mules used as pack-animals everywhere; camels used for transport across deserts, and fish used as an article of diet in Bengal, Assam and coast-strips. Animals also yield hides, horns, fat and bones.



§ 13. **Vegetable Products.**—Though the total area of the country is a large one, the actual area

under the crops is comparatively a small percentage of the total as is seen from the following figures which also indicate changes in the utilization of land from 1937-38 to 1940-41.

Description	1937-38		1940-41	
	Area in million acres	Percentage to total	Area in million acres	Percentage to total
Area according to village papers.	51	...	512	
Area under forests ...	68	13·5%	·68	13·5%
Area not available for cultivation.	93	18%	87	17%
Culturable waste other than fallow.	92	18%	98	19%
Fallow land	45	9%	45	9%
Net area sown	213	42%	214	42%
Area irrigated	53	9·7%	56	11%

The area under forest cannot of course be utilized for cultivation while that covered by mountains, rivers, lakes, roads and the town and village sites cannot be available for farming. Of the rest as much as 45 million acres is left as fallow land to recover from the exhaustion of fertility from crop production and as a result only 42% of the total is actually under the crops from year to year.

1. Food Crops

The richness of India's soil supported by a temperate climate and sufficient rainfall enables her to produce a variety of crops both food gains and commercial crops. The more important of these are being detailed below.

(i) *Rice* is India's most important food crop and covers 69 million acres, the largest area of all.

It requires a rich clayey soil and plenty of rainfall and therefore thrives best in Bengal, Bihar, Orissa, Chhotanagpur, Konkans and the deltas of the Indus, and the chief rivers of the Deccan plateau. An average yield of about 30 million tons is insufficient to meet the requirements of the country and much rice is imported from Burma, the supply having been cut off due to enemy-occupation. The amount produced in the country fell far below the normal consumption of the people and was partly responsible for, an unprecedented famine in Bengal in 1943-44.

(ii) *Wheat*.—Wheat is next in importance to rice. It grows well in a fertile soil having a veneer of sand in it, requires cold and dry climate and a rainfall of 15″ – 25″. The areas most suited to wheat cultivation are the Punjab, Sind, the U.P. and Central India. The quality of wheat produced in the country is much inferior to foreign wheat. Through the efforts of the Imperial Institute of Agricultural Research its variety is being steadily improved. The average area under this crop is 27 million acres and the produce about 10 million tons.

(iii) *Barley*.—It is a minor food crop though extensively 6 m. acres cultivated. The conditions of its growth are nearly similar to those of wheat and it is cultivated mostly in the colder and drier regions of the U.P. and the Punjab.

(iv) *Millets*.—These constitute one of the most important groups of crops in India. They supply food for the poor classes of population and fodder for the cattle. Jowar, Bajra and Sorghum are the chief varieties. They are dry crops and are grown in Sind, Rajputana, the Punjab and the Deccan. *Maize* requires greater moisture and is produced in Northern India while *Pulses* are grown all over the country. The area under the millets is 37 million acres, under maize 5·6 million acres and under other food grains and pulses including gram it is 42 million acres.

2. Fibres

(i) *Jute*.—Jute requires abundant rainfall, damp and hot climate and rich soil which should be renewed every year by floods. India enjoys a virtual monopoly of jute and produces 95% of the world output. Due to adverse economic conditions the industry has been hard hit and the area under the crop has gone down, to 2·8 million acres in 1937-38, but the war gave a great impetus to this industry and the acreage rose from 2·8 million to 4·3 million acres by 1940-41. Compulsory restriction of jute enforced from this year reduced the acreage to about of million which again went upto 3·3 million in 1943, the total yield in that year being 69 lakh bales compared to 86 lakhs in 1937-38.

(ii) *Cotton*.—Cotton is one of the most important commercial crops of the country and occupies a very prominent place in the list of exports, second only to jute. It is best grown in the black cotton soil of the Deccan which retains plenty of moisture. The chief cotton areas are Gujarat, Kathiawar, the C.P., Sind, the U.P. and the Punjab. An area of 18·8 million acres produced in 1942-43 an output of 4·6 lakh bales of 400 lbs. each. The attempts of the Indian Central Cotton Committee have succeeded in producing certain medium staple varieties which are being adopted more extensively, the acreage so covered was 8·9 millions, in 1942-43.

3. Sugarcane and oilseeds

Sugarcane.—Sugarcane requires rich soil and well-drained soil and hot and moist climate. The importance of the crop has since 1932 increased enormously and the area under its cultivation in 1943-44 exceeded 4 million acres, 75% of which was under improved varieties. The U.P. and Bihar are its home provinces while Bombay, the Punjab, Madras and Bengal also claim certain percentages. Now

India is able to produce all her requirements of sugar.

Oilseeds.—Oilseeds constitute an important group of crops covering 17 million acres and are equally suitable for home consumption as for industrial production. The main oilseeds are Linseed, Rape, Mustard, Castor and Groundnut. They require temperate climate and deep, alluvial and moist soil, and they are grown all over India. The import of mineral oil has hit oil-seed products seriously and the area under them has recently gone down. A great percentage of the output is exported to foreign countries.

4. Plantations

Tea.—It is the most important plantation crop. It requires a warm and moist climate and thrives best on the slopes of the hills where water may not settle near the roots. The areas noted for tea cultivation are Assam, Darjeeling, Dehradun, Kangra and Nilgiri Hills. The area covered with tea plantations was $7\frac{1}{3}$ lakh acres and output 430 million lbs. Most of Indian tea is exported to United Kingdom and from there sent to U.S.A. and European countries, while its home consumption is low and comes to an average of only 0·2 lb. per head per year.

Coffee.—Coffee production is confined to the South where warm and moist climate help it to flourish luxuriantly. Mysore, Travancore, Cochin and Nilgiris are the chief centres of coffee plantation. The industry has suffered due to competition of Brazilian coffee.

Tobacco.—Tobacco needs hot and damp climate and is grown in Madras (Trichinopoly), Bengal, Bihar, the U.P. and Orissa.

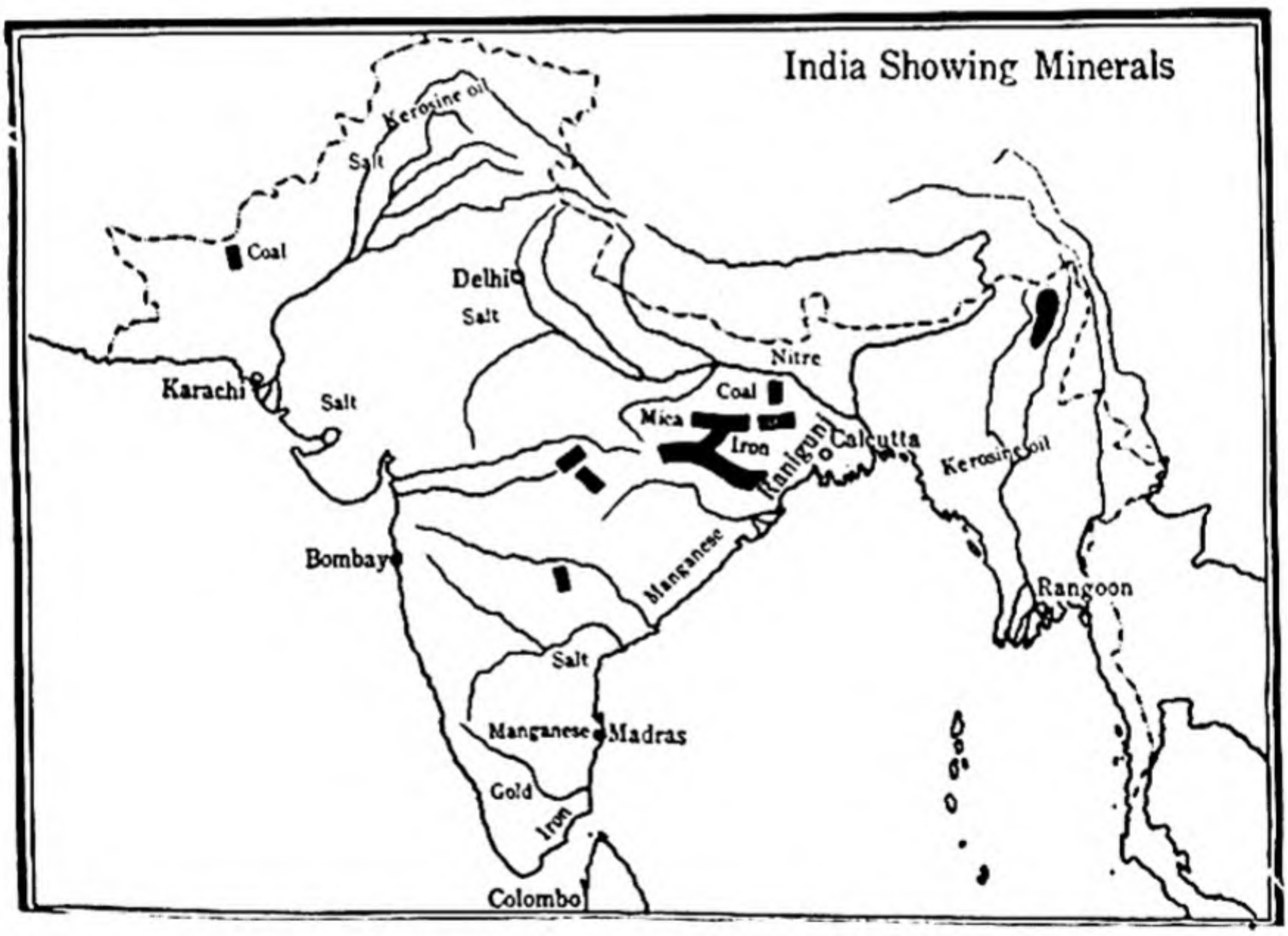
§ **14. Minerals.***—India is said to be rich in

---

* With special reference to C. P. and Berar.

mineral deposits which cannot only maintain most of the key-industries in the country but also can give rise to a number of metallurgical industries. In recent years mineral production has been stimulated on account of the Great European War of 1914, the development of transport facilities and the industrial progress of our country. Principal minerals of India are:

(i) *Coal.*—India produces more coal than any other part of the British Empire except the United Kingdom. Most of it comes from the Gondwana coal-fields (Bengal, Bihar, and Orissa). Besides these coal-



fields, there are coal-mines in Assam, the Central Provinces, Hyderabad State, Central India, Rajputana, Baluchistan and the Punjab. The coal output in 1938 the latest year for which statisties are available was 28·3 million tons, about 3 million tons in excess of

the produce of the previous year and was valued at Rs. 10 crores and 64 lakhs. The Gondwana fields alone were responsible for as big a share of the output as 23 million tons. Evidently thus the Deccan posseses practically no coal-fields, whereas those that are found in Northern India are *unevenly distributed*. With the exception of Bengal coal which is comparable to foreign coal, all the rest is *poor in quality*. A Coal Grading Board has already been established to improve its quality and it is highly essential in the interest of the country to conserve good quality coal.

(ii) *Iron*.—India is the second largest producer of iron-ore in the British Empire. Important iron deposits occur in Singhbhum and Keonjhar, Bonar and Mayurbhanj States of Bihar and Orissa, where a range of iron-ore running continuously for about forty miles is said to exist. The Barakar Iron Works, now the Bengal Iron Company, Ltd., led to the introduction of modern iron industry into India in 1874. The Tata Iron and Steel Company which has shown remarkable development has greatly stimulated the production of iron-ore.

(iii) *Manganese*.—By the side of iron-ore deposits there is usually found a very valuable industrial mineral known as manganese. It is chiefly used in the manufacture of steel. Its compounds are required for printing, colouring cloth and removing bluish tint from glass in the process of manufacture. At one time

India displaced Russia as the first among the world's producers of this metal, but later Russia headed the list. The chief manganese-producing areas are the Central Provinces, Madras, Bombay and Mysore.

(iv) *Gold*.—The Kolar field in Eastern Mysore yields the greatest quantity of gold produced in India which contributes nearly 3% of the world's output of gold. Small quantities of it are mined in Hyderabad State also.

(v) *Petroleum*.—On either side of the Himalayan arc there are two distinct oil-bearing areas, the Eastern and the most important area including Assam and Burma, and the Western area including the Punjab and Baluchistan. The most developed oil-fields in the Irrawaddy valley are Yenang-yaung and Singu which contribute nearly nine-tenths of the total yield of India. Though the home production is greatly increased, it is not able to cope up with the requirements of the country, so much is the consumption of petroleum and petrol augmented in recent years. This shortage has become much more glaring now that Burma has ceased to be a part of India.

(vi) *Mica*.—India turns out more than three-fifths of the world's total supply and ranks first among the mica-producing countries of the world. Its mines exist in Hazaribagh, Gaya, Monghyr and Nellor. It is used as an insulating medium in the electrical industry.

(vii) *Saltpetre*.—This mineral is required for purposes of manure, for the preservation of food and for the manufacture of explosives. It is produced mainly in Bihar, the United Provinces and the Punjab. At one time India had the monopoly of the world's supply of nitrates, but now the production has declined on account of the heavy duty imposed on exports and the competition of Chile nitrates and French potash salts. After retaining a small quantity of the total output of saltpetre in India to be used as fertilizer in the tea gardens of Assam, the rest is exported to foreign countries.

(viii) *Salt*.—It is obtained in India from four sources, namely, from the sea-water on the coasts of Bombay, Madras, and Burma whereby the largest quantity of it is obtained from the Salt Range and the Kohat mines of the Punjab, from the Sambhar Lake in Rajputana and from the sea-water on the border of the Lesser Rann of Cutch. These sources yield about three-fourths of the salt consumed in India. The Government of India has imposed an import duty of Rs. 1-10-6 per maund with a view to protect the salt industry, the duty on salts manufactured in India being Rs. 1-9-0 a maund.

(ix) *Cement-making materials*.—The cement industry has a bright future. The materials such as chalk, limestone and clay which are used in the manufacturing of cement are found at Katni, Bundi, Porbandar, and in the neighbourhood of Lucknow and Cawnpore.

(x) *Other minerals.*—Tin, lead, copper, silver, diamonds, rubies and sulphur are others which occupy not an insignificant place among the minerals of India.

§ 17. **Sources of Power.**—Man has always felt the necessity of utilizing some source of motive power in the processes of his productive activity as his physical energy is hopelessly insufficient to operate heavy tools and instruments. Even in Indian agriculture with its primitive methods and crude and light instruments the use of cattle energy has been found indispensable. How much more imperative is the need of some greater motive power in running huge engines and machines employed in big businesses of modern times! As a matter of fact the provision of cheap and plentiful supply of motive power is an essential prerequisite of the successful industrial development of any country.

The sources of power available in India are:—coal, oil, alcohol, woodfuel, wind, cattle and water.

(i) *Coal.*—It is the most important source of motive power in the country and is extensively used for generating steam on which most of India's big industries and railway systems are operated. But India's coal is of poor quality and is unevenly distributed, mostly concentrated in the Gondwana fields, with the result that it can feed only the jute and iron industries situated in the areas surrounding this region. Its heavy cost of transport to the Punjab and Bombay-Gujarat industrial areas renders its use prohibitive there. No wonder the Western India had been depending on the coal imported from South Africa until the development of hydro-electricity in the Western Ghats.

(ii) *Oil*.—Oil is used for running motor-cars and buses, oil-engines and light machines and also for lubrication purposes, and thus is a very useful source of motive power. Till 1935, when Burma formed part of India, the country was producing about half of her oil requirements, but since the separation of Burma with 90% output, India's oil resources have become precarious, and we had to import oils worth Rs. 1467 lakhs in 1938-39.

(iii) *Alcohol*.—But the deficiency of mineral oil can to an appreciable extent be made up by the distillation of alcohol from molasses, coal, wood and potatoes. Molasses is the by-product of the vast sugar industry of the country and is at present literally wasted for want of its utilization in the manufacture of alcohol. The Power Alcohol Enquiry Committee has already recommended the admixture of alcohol with petrol to the extent of 25% and this scheme opens out bright prospects for alcohol distillation which can firmly stand foreign competition due to its low cost of manufacture.

Coal can also be converted into petrol by the process known as hydrogenation perfected both in Germany and United Kingdom, though it is a matter of speculation if this very expensive process should be adopted in India in face of cheap distillation from molasses. Wood and potatoes can also yield spirit-fuel, and we shall not lack the raw material if an emergency arises.

(iv) *Woodfuel*.—Though wood can be used to

generate energy but due to the employment of crude and wasteful methods its use as a source of motive power is not economical. Moreover, the burning of wood will result in the speedy destruction of forests which are of such immense service to agriculture and other industries that the utilization of wood as fuel cannot be recommended at this stage.

(v) *Wind power*.—The utility of wind power in the country is insignificant. It is used in driving the sailing boats, winnowing threshed grain and may be helpful in running light machines in those areas where wind velocity is sufficiently high. On the whole due to the periodic nature of usual light winds blowing in India, this source of motive power is not dependable.

(vi) *Cattle*.—From very ancient times cattle have been supplying the motive power in agricultural operations like ploughing, levelling, threshing, carting manure and crops and lifting water from the wells. They have also been utilized in the transport of goods and passengers on the country roads. But it is a pity that in a country depending upon agriculture to the extent as India does, the number of draught cattle is insufficient for her needs. They are not only too few but are weak and diminutive in size. The crying need of the cattle is improved breeding and provision of adequate fodder-supplies without which their utility as a source of agricultural motive power cannot be augmented.

Apart from agriculture and transport, cattle are also used as power in crushing

oilseeds, and to a greater extent in crushing sugarcane for the manufacture of *gur*, an extensive cottage industry in the sugarcane regions of the country.

(vii) *Water power.*—India promises to be one of the leading countries of the world in regard to the development of hydro-electric power and great strides have already been taken in this direction. Cheap motive power is indispensable in her industrial expansion which is bound to be speeded up due to favourable opportunities presented by the war. And luckily the country possesses vast resources for hydro-electricity, being second only to Canada in the world. The absence of perennial rivers with continuous water-supply throughout the year is being faced with the construction of storage schemes that help not only in generating electricity but also release water for irrigation purposes.

Hydro-Electric Schemes in India.—Bombay Presidency holds a unique position in the development of hydro-electricity owing to the presence of the Western Ghats rising up to convenient height of over 2000 feet within a few miles of industrial Bombay and Suburbs and receiving heavy rainfalls from the South-West Monsoons. It possesses the greatest hydro-electric schemes of India, namely, the Tata Hydro-Electric Power Supply Company Ltd., started in 1915, the Andhra Valley Power Supply Company Ltd., started in 1922, and the Tata Power Company Ltd., started in 1927, the three schemes having a combined normal capacity of 246,000 H.P. They supply energy to the city of Bombay, Bombay Suburbs, Thana, Kalyan and Greater Poona, for the Bombay tramways, the majority of mills and industries in

the city, the B. B. & C. I. Railway in their suburban lines and the whole of energy required for the G. I. P. Railway in Bombay City and their main line traction up to Kalyan.

Mysore claims the first hydro-electric scheme of any magnitude undertaken in India in the Shivasamudram Scheme on the Cauvery river started as early as 1902. Its present expanded capacity is 69,000 E.H.P. and it supplies power to the Kolar gold-fields with transmission lines 92 miles in length, and Bangalore city at a distance of 60 miles, the demand for increased power by about 200 towns and villages encouraged the state to construct power stations at Shimsha falls and Jog falls for the production of 23,000 and 24,000 H.P. respectively. The transmission system now extends to every district of the State and by now will be suppling power to more than 250 towns.

Madras has three important schemes. The Pykara Hydro-Electric Scheme started in 1929 utilizes the waters of the Pykara river and along with its extensions will be generating 40,000 K. W. energy. It supplies power to Coimbatore, Erode, Trichinopoly and Negapatam, a system covering a distance of 200 miles and further extensions to Udumalpet, Sembatti, Madura and Vidhunagar. The Mettur Hydro-Electric Scheme generates power from the spilt waters of the Mettur Stanley Dam, one of the largest structures of its kind in the world, 176 feet high and impounding a total of 93,500 million cubic feet of water. The scheme develops 16,000 H.P. from each of the two turbines installed there. The Papanasam Scheme is the third scheme undertaken by the Madras Govrenment and utilizes the waters of a fall about 330 feet on the Tambraparni river in the Tinnevelly district. The scheme is scheduled to be completed this year.

In the United Provinces, the Gangetic Canal, Electric Grid System has developed 29,700 K. W. energy from 7 out of 10 falls on the Ganges Canal and supplies power at attractive rates for domestic, industrial and agricultural purposes to 14 districts in the west of the province and to Shahadara in Delhi province. Besides supplying 75 towns with industrial and domestic energy, it provides power for pumping irrigation water from rivers, and open and tube-wells. The tube-well scheme comprising about 1600 tube-wells covers the districts of Moradabad, Bijnor, Budaun, Muzaffarnagar, Meerut, Bulandshahar and Aligarh and is introducing irrigation over approximately one million acres hitherto with out any source of irrigation. The Sharda Canal Hydro-Electric Scheme will also be developed on similar lines and supply energy for lighting the towns of Fyzabad Division and pumping Gogra waters into the Fyzabad Canal. When completed the Nayar Dam in Ninital district and the Rihand Dam in Mirzapur district will be together able to serve the entire area between the Ganges and Jamuna.

The Punjab has an important scheme known as the Mandi Project generating power from the headworks of the Uhl river and supplying electricity to 19 towns in the Punjab including important industrial centres like Amritsar, Lahore and Ludhiana and the workshops of the N. W. Railway at Moghalpura. At the completion of the extensions the scheme will produce sufficient energy to transmit to as distant places as Saharanpur.

Kashmir State has the Baramulla Scheme that diverts the waters of the river Jhelum at the headworks of Baramulla and carries it in wooden canal projecting from the hillside over a distance of $6\frac{1}{2}$ miles to the power-house. From there transmission lines run to Shrinagar and Gulmarg. Another scheme was opened at Wazirabad in 1937 to supply power

to the neighbouring districts. Besides the above, two more schemes the Muzafferabad hydro-electric installation and the Jammu hydro-electric installations have since come into operation.

The Nizam's dominions have several projects being completed and others under contemplation that will develop vast hydro-electric resources of the state. The main schemes are the Tungbhadra Project, the Devanoor Project, the Nizam Sagar, the Kaddam, the Purna, the Manair, the Penganga, the Godavary, the Lower Kistna and the Upper Kistna Projects.

EXERCISES

1. Consider India's advantage and disadvantage in respect of geographical location. Draw a sketch-map to illustrate your answer.

2. Describe the principal natural divisions of India and their characteristic features.

3. Give your opinion with regard to the following statement and state your reasons therefor.

> 'There is no part of the world better marked off by nature as a region by itself than India, exclusive of Burma. It is a region full of contrast in physical features.'

4. 'While nature has showered her bounties on the country with a liberal hand, man has failed to profit adequately by them, so that contrast between the bounties of nature and the poverty of man is very striking.' How far does this statement apply to the Indo-Gangetic Plain?

5. Describe India's climatic conditions and justify the following statement:

> 'No factor of man's environment exercises a wider influence on man than climate.'

6. Draw a map of India to indicate the distribution of rainfall in various parts of the country. Suggest reason for variations in distribution and estimate the vital importance of rainfall to economic life in India.

7. Describe the characteristic soils and climatic conditions of your province. How do they affect the economy of the people?

8. Indicate the economic potentialities of forests in India. What have you to say with regard to the following statement?

> 'The forests are one of India's most valuable assets. But if she is to reap their full advantage, she must first incur a substantial capital expenditure.'

9. Describe the chief minerals mined in India and indicate their distribution by means of a sketch-map. Do you onsider India's mineral resources as adequate for industrial development on modern lines?

10. What are the principal sources of power available in India? Consider in this connection the possibilities of hydro-electric development.

11. 'The natural resources of India are very great; what is chiefly required is their proper conservation, development and use.' Explain this statement with special reference to forest, minerals and water-power.

12. How far is India fitted by nature for industrialization? From this point of view briefly describe India's natural resources.

CHAPTER IV

LABOUR IN INDIA

§ 1. **Population.**—India enjoys the distinction of possessing the largest population of all the countries in the world. According to the census held in 1941, the total population of India was ascertained at 389 millions, *viz.*, British territory 296 millions and Indian States 93 millions. According to the report of the Public Health Commissioner with the Government of India the population of British India as estimated on June 30, 1935, was given as 278 millions while approximately 15 millions were calculated to have been added since 1931 to the entire Indian population. The figures for the census taken in 1941 show that the 390 million mark had been reached by India's population—undoubtedly a staggering figure.

Even according to 1931 figures, an area of 1·8 million square miles or 3·3% of the earth, contained 1/5 of the world population that was estimated to be 1850 millions. Today Indian population is three times that of the United States of America though India is only half in area.

Table showing the rate of growth of population at census years during last half-century.

Census year	Population in millions	% Increase
1881	254	
1891	287	13·2
1901	294	2·5
1911	315	7·1
1921	319	1·2
1931	353	10·6
1419	389	10·2

During the last 60 years, i.e., between 1881 and 1941, the increase has been over 53%. The figures

upto 1931 included the census figures of Burma and Aden also which have been removed now. The not Indian population in 1931 being 338 millions only. the 1941 figures register an increase of 11·5%.

The figures below give at a glance the changes in India's population in the decade 1931—41.

Items.	1931	1941
	milions	milions
Total population	338	389
Male	174	201
Female	164	188
Rural	301	339
Urban	37	50
Literate ...	23	47

§ 2. **Density of Population.**—Density is indicated by the number of persons living per square mile. Though the population of the country is high, its density is rather low.

Table showing the variation in density of population

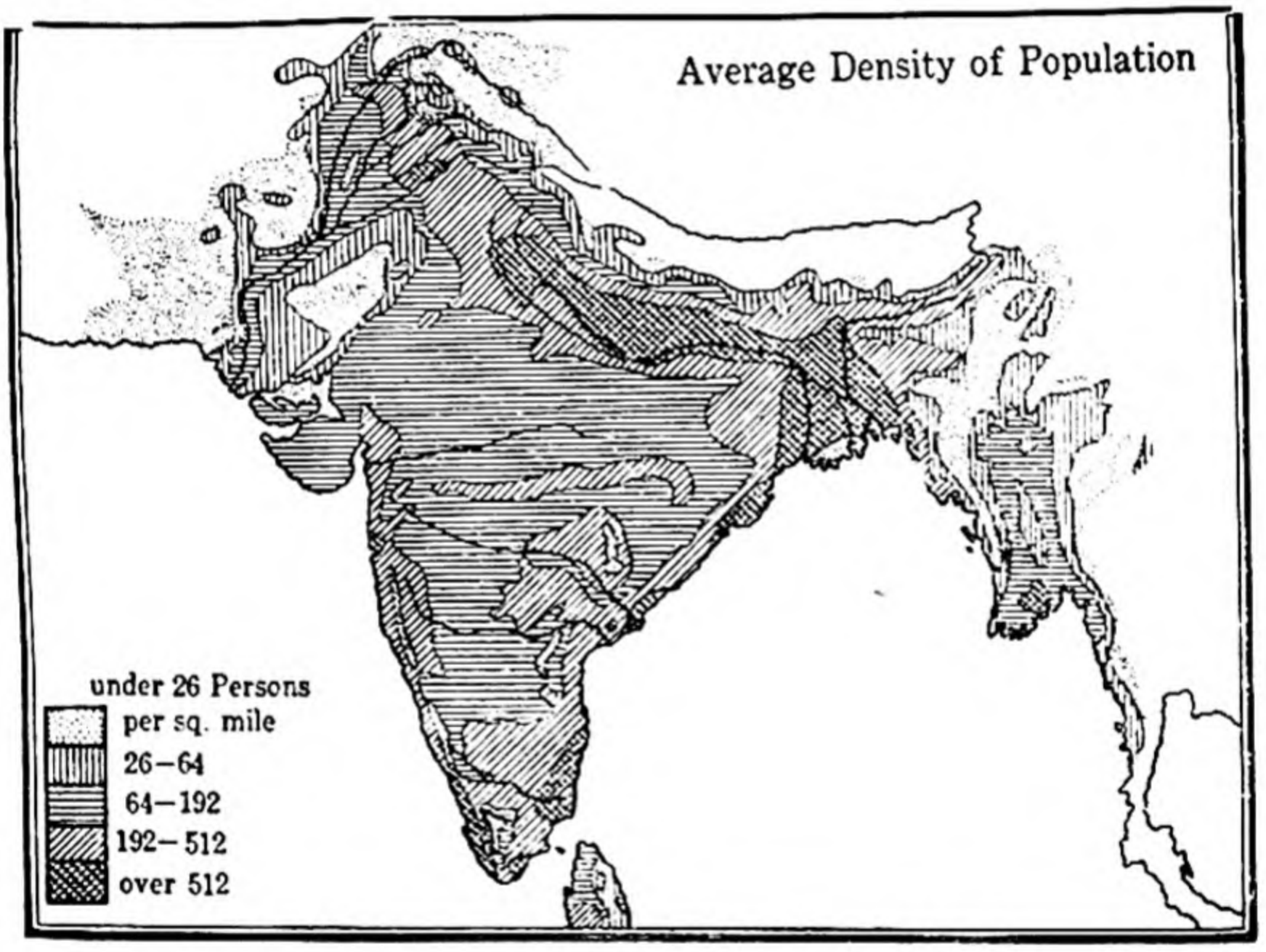
Year	British Provinces	States	Whole India
1921 ..	226	101	176
1931 ..	248	114	196
1941	15·2%	14·5%	15%

The low density of Indian population is obvious as compared to some other important countries.

Country	*Density* in *1931*
India	196
Belgium	699
England and Wales ...	686
Japan	478

Taking India as a whole, the density of population varies from province to province, ranging from 9 persons per square mile in Baluchistan to over 2000 in the South-West Coast. Below are given the figures of density of population in some provinces of India.

Province	Density of Population	
	1931	1921
Delhi	1110	1598
Bengal	648	742
United Provinces ..	456	500
Bihar and Orissa ..	454	521 Bihar 360 Orissa
Madras	328	366
Punjab	233	265
Bombay	177	273
Baluchistan ..	9	9



§ 3. **Causes of Variation of Density.—**

(i) *Rainfall.*—Of the factors determining the density of population in India, *rainfall* is the most important. On the whole the amount of rainfall and its proper distribution determines the density, though there are tracts like the *Tarai* in U.P. and the hilly tracts of Assam

which are very thinly populated in spite of receiving copious rainfall. Agriculture is India's main industry, and given the fertility of the soil with evenness of the surface, it may be argued that density does follow rainfall as is shown in the map.

(ii) *Irrigation*.—Where rainfall is scanty, the provision and extension of irrigation facilities, especially canal irriagtion, lead to an increased density of population. The canal colonies of the Punjab, once an arid and sparsely populated area, have shown marvellous growth in the density. Lyallpur district, for example, having a density of only 7 per square mile in 1891 before the construction of canals, recorded a density of 17 in 1901 and 272 in 1911. The same is true of several other tracts in the country.

(iii) *Configuration of land*.—Level stretches of land are most suitable for agriculture, and if they contain rich soil with facilities for irrigation, they can naturally support heavy population. The Indo-Gangetic Plain is more densely peopled than the Plateau as it apparently enjoys these advantages over the latter.

(iv) *Stage of economic activity*.—Density is also dependent on the state of economic development. A hunting tribe of very small size soon exhausts the game of a large district. It must have room to wander freely from place to place as game becomes scarce in this or that locality. Thus a very large amount of

land is needed to support a very small number of persons in a very poor manner. But the pastoral life permits a denser population. Though it also requires a large amount of free land on account of the fact that the flocks and herds are constantly eating different localities bare. Yet food-supply is greater and less precarious now than in the hunting stage. In the agricultural stage more means of subsistence such as cereals and other agricultural products than mere meat and milk of the pastoral stage are available. Life becomes settled and food-supply certain and abundant. Consequently the density of population increases very rapidly. The rayatwari tracts noted for improved method of cultivation have a greater density than certain areas under zemindars where the tenants are too poor and backward to adopt scientific ways of agriculture. It really is the question of human ability to produce wealth or force the earth to yield means of human subsistence. The production of wealth is more intensive and concentrated in industrialized areas than in agricultural; hence the high density of mining, textiles, and sugar production centres in the country. The hilly and forest lands of Assam, Tarai, and Northern C.P. are uninviting due to lack of means of transport and communication and naturally they remain thinly populated.

(v) *Safety of person and property*.—Other things remaining equal, the security of

life and property must be assured to enable people to inhabit and stay in a region. The constant state of unrest on the north-western borders is prejudicial to the growth of a stable population there even if economic development is intensively adopted. None will find it worthwhile labouring hard to amass fortune if he is in the danger of being deprived of it at the same time risking his liberty and life. The establishment of a strong central government after the breaking up of the Mughal rule in India helped immensely in the growth of population in North-Western India.

§ 4. **Vital Statistics.**—Vital Statistics are figures pertaining to births and deaths. *Birth-rate* is the number of children born per 1000 of persons; and *death-rate*, the number of persons dying per 1000 of population. The growth of population depends on the survival rate, that is, the excess of births over deaths. The Indian birth and death-rates are abnormally high as is clear from the following vital statistics.

Country	Birth-rate	Death-rate	Survival rate
Egypt	44.8	26.8	18
India	35.5	25.9	9.6
New Zealand ..	18.4	8.3	10.1
England and Wales	14.6	12.2	4.4
Germany ...	16.6	11.2	5.4
France ...	17.4	16.3	1.1

The high birth-rate and high death-rate seem to go together as well as low birth-rate and low death-rate. It may also be argued that high death-rate is

the result of high birth-rate. The comparison between Indian and New Zealand figures is instructive. The net additional gain or survival rate of population in New Zealand is greater though its birth-rate is about half of India's, the obvious reason being its low death-rate which is exactly one-third of that of India.

§ 5. **Causes of High Birth-Rate·—**

1. *Early marriage* is the most potent cause of high birth-rates in the country. Marriage is essential for every body and specially for girls, and they take place at an early age. As many as 77 males and 181 females per thousand of population get married before the age of 15. Due to certain religious beliefs some people like to see their girls married before they are 12, that is, even before the age of puberty. The natural consequence of such marriages is an early beginning of child-births and these continue unchecked.

2. Some *religious prejudices* (specially among Hindus) according to which it is felt to be an unavoidable responsibility for a person .to beget a child, preferably a male one, strengthen the above tendency of more births. It is quite natural that a girl may be born in direct disregard of the parent's desire for a boy, and that may lead to further attempts resulting in higher birth-rate.

3. *Poverty* is another factor that seems to be responsible for bigger families though no immediate causal relation can be established between the two. Perhaps the birth-rate is high among the poor and culturally backward classes as they do not appreciate the dignity of life, and the worth of living to them is low. A few extra children will not make much difference to their standard of life which is already at the level of irreducible minimum. On the other hand, they may be looking upon the children as contribu-

tors to the family income as soon as they grow up to undertake any kind of odd jobs. It is a pity that the poor cannot afford to bring up and educate their children yet they get them most, thus degenerating the stock and worsening their already low economic position.

Extensive education of the public opinion is necessary to help people realize that it is a great sin against the society to bring forth a child whom one cannot properly feed and train into a worthy citizen. The social conscience of Indians must be aroused to the supreme necessity of putting a stop to child marriages and also exercising upon themselves moral restraint and artificial checks to keep the births at a low level. Seeing the snail's pace of the present economic development of the country together with all avenues of migration to foreign countries having been barred against them, the only conclusion to arrive at is that India can well afford to go without a single birth for a long time to come.

§ 6. **Causes of high death-rate.**—The high death-rate is due to high mortality among infants as well as young mothers at reproductive age.

1. INFANTILE MORTALITY.—Though it has shown a downward tendency since 1921, it is still awful to think that 179 children out of 1000 born die within twelve months of their birth. In 1935 as many as 40% of these deaths occurred in the first month. Of the deaths in the first month 61% occurred in the first week. Apart from infantile mortality, the death-rate among children under 5 is also pitifully high, 43 per-cent of the total deaths in India occurring among such children.

Among the provinces the highest infantile mortality amounting to 261 per thousand occurred in C. P. followed by U.P. with 189; but among the towns Hyderabad enjoys the unenviable distinction of recording the highest infantile mortality.

Cities	Infant Mortality	
	1941	1931
Hyderabad (Sind)	221	?
Nagpur.	219	270
Calcutta.	212	268
Bombay.	211	298
Madras.	209	246
Delhi.	186	129
Lucknow.	134	329

(i) *Social.*—There is no youth in India who does not want to marry. Every one marries whether fit or not and, due to the custom of early marriage, child-birth takes place before the wife is physically mature. The crude and insanitary methods of midwifery adversely affect the health of the mother and, through her, of the child. If the child escapes the risks of child-birth, malnutrition and want of efficient medical help render him liable to respiratory diseases, then diarrhoea and enteric fevers. *Purdah* in the towns, preventing the ladies from enjoying fresh air and exercise, undermines their health and renders them and their infants prone to severe illnesses. Moreover, the advent of children in quick succession generates paternal apathy towards them and a deep-seated faith in fatalism leads to a comparative neglect of child's health.

(ii) *Economic.*—Poverty is a great curse and doubly so if it is accompanied with child-birth. Mud houses without proper ventilation, bare and damp floors, dark and dingy confinement rooms often packed with household belongings, are a common feature of village life. If even then the mortality in villages is about half of that in the cities, the credit should be given to the better health and disease-resisting power of the mothers, plenty of fresh and pure air and sunshine. Industrial towns are congested and specially the labour quarters or *chawls* are overcrowded. Rents

being high, the workers have to content themselves with a single room as the family abode. There is no wonder that infants die like rabbits if they are packed like sardines in their one-room tenements, with hopelessly insanitary surroundings, inadequate medical relief, poor feeding, and few public parks where to breathe fresh air and bask in the sunshine. Leave with pay or maternity benefit to expectant mothers is rare and inadequate, and their employment in the workshop till almost the time of delivery inflicts incalculable injury to their health and the expected child. Soon after the childbirth they are forced to resume work, and in the absence of child clinics where the babies could be looked after while their mothers are at work, they feel compelled to drug them to keep them quiet. The Bombay Labour Office recorded 90% of children being drugged with abnormally heavy mortality of over 800 some time ago. It is sufficient to show the extent of the evil of drugging children with dire consequences, as it prevails specially in industrial towns.

2. MATERNAL MORTALITY.—The high mortality among mothers can be traced to the same causes as are responsible for infantile mortality. Paucity of women's hospitals, and maternity clinics in towns, absence of trained nurses and mid-wives in the villages together with the want of education among girls about the care and precaution necessary for an expectant mother, combine to account for heavy deaths among them. The result is that as many as 10% girl-wives die in child-birth, while the deaths among mothers number up to two lakhs per year in the country. The average maternal mortality for India is 24 per 1000, while Bengal tops the list of provinces with 49 and C. P. shows the lowest rate of 8 only.

DISTRIBUTION OF POPULATION

The population of India can be distributed on the basis of occupation, of age, and of country and town.

The occupational distribution is economically most important as it throws light on the occupations or types of productive activity that different sections of population follow in order to sustain themselves.

§ 7. **Distribution on the basis of occupation :—** The following table shows that a majority of 67% of people in India live on agriculture, while only 10% draw their livelihood from industries followed by 6·7% depending on trade and transport. No better commentary is needed to prove that our economic position is *unbalanced* and *insecure*. It is unbalanced because all sides of our economic activities have not been proportionately developed. There is too much dependence on agriculture, while the development of industries and expansion of the means of transport and communications seem to have been neglected. There has been no planning of production on national scale and no adjustment of resources between occupation and occupation. The result is that while agriculture is expected to support, which it cannot, the ever-growing population of India, the industries suffer from want of adequate capital and efficient labour.

Occupation	Distribution of population per cent	
	1928	1932
A. Production of Raw material :—		
I. Exploitation of animals and vegetables	72·2	67·1
II. „ „ Minerals ...	·24	·23
B. Preparation and supply of material Substances :—		
III. Industry	10·75	10·0
VI. Transport	1·54	1·5
V. Trade	5·5	5·15
C Public Administration and Liberal Arts:—		
VI. Public force	·71	·55
VII. Public Administrat on	·69	·64
VIII. Professions and Liberal arts ...	1·43	1·5
D. Miscellaneous :—		
IX. Persons living on their income ...	·13	·14
X. Domestic service	1·73	7·1
XI. Insufficiently described occupations...	4·1	5·1
XII. Unproductive	1·25	1·1

Our economic position is insecure because agriculture, the mainstay of our economic life, is liable to fail and involve the vast majority of population in poverty and misery. Agriculture by its nature is gamble in rains, and rainfall in India is seldom timely and properly distributed. The failure of crops hits not only the people directly dependent on land, but also those busy in trade and transport as these agencies have less goods to exchange and carry about. The sad plight of the Indian railways that had to suffer a deficit of Rs. 63 crores in five years of last depression is a recent instance of the prosperity or adversity of trade and transport in India depending upon the fortunes of agriculture.

The low standard of life of a high percentage of India's millions may also be explained by their dependence on agriculture as the only means of living. It is true that with improvements in the art of cultivation land can be made to yield more produce and thus support more people on a higher standard, but however well cultivated, it cannot produce sufficient to remove India's poverty. The real solution of this problem lies only in the rapid and all-round development of country's industries.

Government departments provide employment to a mighty little section, Police, Military and Public Services accounting for only 1·2% of population. With an expansion in the nation-building departments, the employment is bound to increase but can hardly exceed 2%. Domestic service records a tremendous increase which is partly due to landless labourers moving from rural to urban areas. Being thrown out of agriculture, they seek domestic service, the only unskilled occupation they can adopt. The number of people living on the income of their investments is negligible. Insufficiently described occupations show an increase due to the growth of partly and occasionally unemployed persons; while the number of unproductive people like

vagabonds and criminals, etc., has luckily gone down.

§ 8. **Distribution on the basis of age.**—The following table shows the age distribution in 10-yearly age-groups of males and females in India.

Age-group	Percent of total	
	Males	Females
0—10	28·0	28 9
10—20	20·9	20·6
20– 30	17·7	18·6
30—40	14·3	13 5
40—50	9·7	8·9
50—60	5·6	5·5
60—70	2·7	2 8
70 and over	I·2	1·3

The age-groups give us an idea of the effective population or people who form the working section of the population and produce wealth. The minimum age for a labourer in India is 15 and maximum 60 and the effective population between these limits is estimated to be as low as 44%. Another feature evident from the above is that the first group is the biggest group due to high birth-rate, yet this one combined with the half of the second that is up to 15 years' limit, make up 38 per cent of children who are economically unproductive. The old people of 60 and over number only 3·8%, which shows that Indians do not enjoy longevity of life. As a matter of fact the mean age in India is only 23·02 as against 30·6 in England and Wales, while the expectation of life of a child at birth is 26·7 whereas in England and Wales it is more than double of this figure.

§ 9. **Distribution on the basis of country and town.**—India has always been essentially a country of villages, the urban population in 1941 being only

13% as against the rural population of 87%. The progress of urbanization has been very low it being only 2% since the last census as compared to just over 1% increase during the preceding three decades. The range of urban population varies from 2·8% in Assam to 26% in Bombay, which has the distinction of being the most urbanized province in the country. As compared to this, the urban population constitutes a big proportion of the whole in some foreign countries, 49% in France, 50·8% in Northern Ireland, 53·7% in Canada, 56·2% in U. S. A. and as high as 80 per cent in England and Wales.

Urban and Rural distribution of Population

Class of places	Percentage of total Population					
	1941	1931	1921	1911	1901	1891
Rural Areas	87	89	89·8	90·6	90·1	90·5
Urban Areas	13	11	10·2	9·4	9·9	9·5

The distribution of population between urban and rural areas is of great economic significance as it indicates the level of industrialization attained by the country. Large-scale and mechanized industries are as a rule located in towns while the rural population has to depend on land as the means of its subsistence. The figures given above proclaim eloquently that India still lies in agricultural stage supplemented with a little industrialization, while England owes her prosperity and power solely to industrial development. Again, towns serve as seats of educational and cultural advancement in addition to acting as laboratories where scientific improvements are devised and applied to industry. These in their turn filter to the villages which are usually the followers of the towns in this respect.

Theories of Population

§ 10. Malthusian Theory of Population.—The celebrated theory of population, known after Malthus, was expounded by him in his *Principles of Population* and was based on his observations of the conditions of population and its living in Western European countries. The two propositions of the theory are: (i) The natural tendency of population to multiply is so rapid as to be expressed by the geometric progression of 1, 2, 4, 8, 16, 32 and so on. (ii) But the means of subsistence develop in the arithmetic progression of 1, 3, 5, 7, 9, 11 and so on. The inference drawn from these premises is that population grows faster than the means of subsistence and this is not in the interests of human well-being. This excessive growth of population should be controlled by preventive checks otherwise positive checks will begin to operate.

The *preventive checks* are voluntary checks applied by human beings to *reduce the birth-rater*; for example, late marriages, moral restraint, postponement of getting children even when married either by abstaining from cohabitation or using contraceptives, incapacitation of men and women suffering from diseases that are likely to be inherited by the offsprings, and others. The *positive checks increase the death-rate;* for example, poverty leading to malnutrition of children and grown-ups rendering them weak and thus liable to diseases and epidemics, struggle for the control of limited resources of the earth among nations of the world resulting in wars that maim and kill hosts of people and bring untold misery in their wake. The line of action suggested by the above discussion is that it is prudent for men to exercise preventive checks and thus limit the growth of their numbers, otherwise positive checks with all

their misery and sufferings will overtake human beings.

§ **11. Is Malthusian Theory Operative?**—The first proposition has been readily accepted but the second proposition and the inference are being disproved by pointing out that since the beginning of the 19th century the world's population has increased rapidly yet at the same time people now-a-days are enjoying a higher standard of comforts than before. For example, the population of England grew fourfold yet the national income multiplied sixteen times in course of the 19th century with the result that at the end of the century an average man was four times as rich as at the beginning. It is true that Malthus could not foresee the tremendous increase in human efficiency to force Nature yield her riches, that was made possible by improvements in the art of cultivation and scientific inventions applied to trade and industry. Even in India with 253 millions of people in 1881, the income per head was Rs. 27, but with 319 millions in 1921, the income increased to Rs. 126, according to F. Shiraz. Economists such as Fisher and Albrecht Pench calculate that earth can support about 8 milliard people, *i.e.*, 4 times its present population. Thus there is no danger for the positive checks to set in so furiously as Malthus apprehended. But it is evident that the power of the earth to produce wealth is limited and follows the law of diminishing returns, and Malthus' fears will be realized sooner or later.

§ **12. Malthusian Theory and India.**—In agricultural countries, like India, where the means of production of wealth are as crude as they were a thousand years ago, and where the growth of industries is so slow, the application of Malthusian theory will be visible sooner than later. Some critical observers even now maintain that India has crossed that limit of population when each person could enjoy the

highest income, and every growth in population will mean a deterioration in economic position and progressive poverty. At present, even 50 years after the beginning of industrialization, about 5 million people are employed in our industries and, with all the optimism one can command, it is hard to believe that our industrial expansion will be so rapid as to absorb the yearly growth of population amounting to 3 miliions. A visit to labour slums and the village hovels, whose number is unlimited, will convince any sensible observer that our standard cannot, with any stretch of imagination, be called satisfactory for a human race. Really it is to be wondered why our death-rate is not higher than what it is.

The remedy, of course, lies in making all possible improvements in agriculture and big industries and developing and revitalizing our cottage industries, and to a greater extent in social legislation and moral training to postpone marriage and abstain from getting any more children by all possible means. In the event of these measures not being adopted Nature will not hesitate long to apply her positive checks to Indian population.

2. *Optimum Theory*

§ **13. Optimum Theory of Population.**—Optimum means the best or the most desirable. It is a very important matter for any nation, and for the world as a whole, that its population shall be as near as possible to the *best* number, the number which can produce most per head and therefore live most comfortably. A single family on an empty earth, even with all the resources of the world to draw on, would be miserably ill off; so also will be the excessive number of inhabitants who would barely have standing room on the earth. Between these two extremes is a number which is the most desirable and with which economists are concerned today. This opti-

mum number will not always be the same. Changes in the economic structure of a society—in the way its farms and factories are run, in their size and equipment, in the railways and roads and canals that link its towns, and in its trade with the outside world—always make a difference to this optimum, one way or the other. There is an optimum distribution of population, as between different occupations and different places, as well as an optimum total number. In discussing the population of a country at any time, therefore, there are two questions which an economist has to answer: "Does the number of people in this country correspond to the optimum?" and "Are they distributed between places and occupations in the best possible manner?" If he finds that neither numbers nor distribution are the best possible, he has to discover, by thorough and careful investigations, whether the total population is in excess of the optimum that the troubles have arisen, or whether a particular occupation has more workers than another that the problem of unemployment has cropped up.

§ **14. Is India over-populated?**—A country is said to be over-populated when its population exceeds the optimum number. To say what figure corresponds exactly to the optimum population under a given set of circumstances is rather difficult, and therefore to declare on the basis of optimum whether India is over-populated or not is still more difficult. A guess may, however, be made with regard to over-population. In India the mortality rate is exceedingly high specially among infants. The preventive checks are practically non-existent. People neither abstain from marriage, nor postpone it. Religion and joint-family system both encourage marriage here, and early marriages are common among the Hindus and also the Muslims. Hence the growth of population is unrestricted, and to absorb this growing population it is necessary to have rapid improvement

in agriculture and phenomenal development of industry. Such a quick economic advancement is well-nigh an impossibility, considering the sluggish progress in the past. Basing our conclusion on these general grounds, we may say that India exhibits all signs of over-population.

Indians would be well advised, under the present state of affairs, to keep down their number from swelling any further by every possible means. Enlightened public opinion is already in its favour, but more propaganda and legislative measures are needed to educate the opinion of the ignorant masses and, if necessary, to bring them round by the force of law. More of general education and public health measures would prove to be of great assistance. But the fact that agricultural and industrial progress should also start at a rapid pace to help us in realizing our object is not to be overlooked.

EXERCISES

1. What is meant by Density of Population? Account for the variations in the density of population in different parts of India.

2. Draw a sketch-map of India to show how the density of population in her various parts follows average annual rainfall.

What inference can you draw from the average density of population of a country with regard to the economic condition of her people?

3. Woodruff observes: "A country that could support one savage hunter for each fifty square miles, might support ten pastoral people, or a hundred semi-civilised agricultural and pastoral, or 1600 to 2,000 modern farmers." What reasons do you assign for these differences?

4. Explain why the pastoral stage permits a denser population than the hunting stage, but a less dense population than the agricultural stage.

5. The Indian birth-rate is one of the highest in the world. What are the economic consequences of this fact?

Of the varieties found in India, the cow with its offsprings has proved most useful economically throughout the ages and it is no wnoder that it is worshipped with religious veneration. But unfortunately the cattle in India are *ill-fed*, *ill-bread* and *ill developed*. Due to lack of fodder-supply, they are half-fed and deteriorate in quality. This in itself reduces their draughting utility. No serious attempt has been made to improve their breed except meagre progress recently seen due to the initiative and encouragement of the Government. As a matter of fact, though their number has increased by 5 millions between 1930 and 1935, the average draught animals per cart and plough numbering 5 and 17 millions respectively have gone down. The cattle census of 1935 and 1940 revealed the following figures:

Cattle	in millions.	
	1935	1940
Cows and buffaloes	156·2	110
Sheep and goats	48·	45
Horses, Mules and Donkeys	15·	12
Camels	1	1

§ 2. **Agricultural implements.**—Our cultivator's farm implements are only few in number, simple in kind, small in size, obsolete in character, and very insignificant in value. Plough which is the chief implement, is still the old-fashioned one. Of the other implements, those that may be mentioned are the bullock-carts, hoes, harrows, *kodali*, sickles, and sieves. Practically all of these are inefficient and unsatisfactory. The bullocks used for ploughing fields are poor in quality and almost unfit for the kind of work they do. More advanced and up-to-date types of tools and implements are totally unknown. Labour-saving device and power-driven machinery are too expensive for the poor cultivator.

That is the reason why the agricultural yield per acre in India is probably the lowest of all the civilized countries.

§ 3. **Buildings and machinery.**—The capital of our artisan classes is equally poor. They use ordinary and low-priced tools and implements. Our modern industries fare no better. They are no doubt run on modern lines using power-driven machinery and having huge masonry buildings, still they are far behind the highly developed industries of the civilised world, and there is vast scope for the introduction of the latest devices and improvements in them.*

Irrigation Works

The chief characteristics of rainfall in India are its unequal distribution over the country, its irregular distribution throughout the seasons, and its liability to failure or serious deficiency.

Though the average rainfall in the country is 45″, its range varies from less than 3″ in Upper Sind to 460″ in Assam Hills. Thus there are portions in the country, which suffer as much from the scarcity of rain as from the excess of it.

The second important characteristic is its unequal distribution throughout the seasons. Except the south-east of the Deccan Plateau where the heaviest downpour is received from October to December, by far the greatest portion of the rain falls during the South-West Monsoon months of June to October. The normal for the winter months is comparatively small, varying from ½″ to 2″, while the hot weather, from March to May, is practically rainless. As a consequence, though the *Kharif* crops generally receive copious rainfall, the more important *Rabi* crops often suffer from drought.

---

*For a detailed discusson, see chapter on 'Large-Scale Industries.'

The most unsatisfactory feature of rainfall from the agricultural point of view is its liability to failure or serious deficiency. Taking the average for the whole country, the annual rainfall seldom varies beyond 7″ from its normal of 45″, yet separate tracts are liable to extraordinary variations. An observation over a long period shows that out of five years one year receives good rainfall, one is definitely poor and three are indifferent. And there hardly passes a year without witnessing famine conditions in one or the other part of the country due to precarious rains.

Of all the problems affecting the destiny of agriculture, the question of water-supply is the most important, as the prosperity or poverty of more than 80% of Indian people is caused by its adequate supply or failure. The great need of artificial irrigation naturally arises with a view to removing the menace of lean years to the country's agriculture. Moreover, even if natural rains have been timely and adequate they will be insufficient for rich commercial crops like sugarcane and rice which will need repeated waterings from artificial means.

§ 4. **Canals.**—The means of irrigation available to farmers are canals, tanks, wells and other sources like ponds, rivers, etc. Of these by far the most important are the canals. The area under canal irrigation has risen from $10\frac{1}{2}$ million acres in 1878-79 to 30 million acres in 1940-41. In the latter year the area irrigated by canals amounted to 12 million acres in the Punjab which possesses the most highly developed canal irrigation system in the world, 4 million acres in Madras, U. P., and Sind. It may be mentioned that as much as 97·1% of total cropped area in Sind was irrigated mostly by canal irrigation.

The Government Works

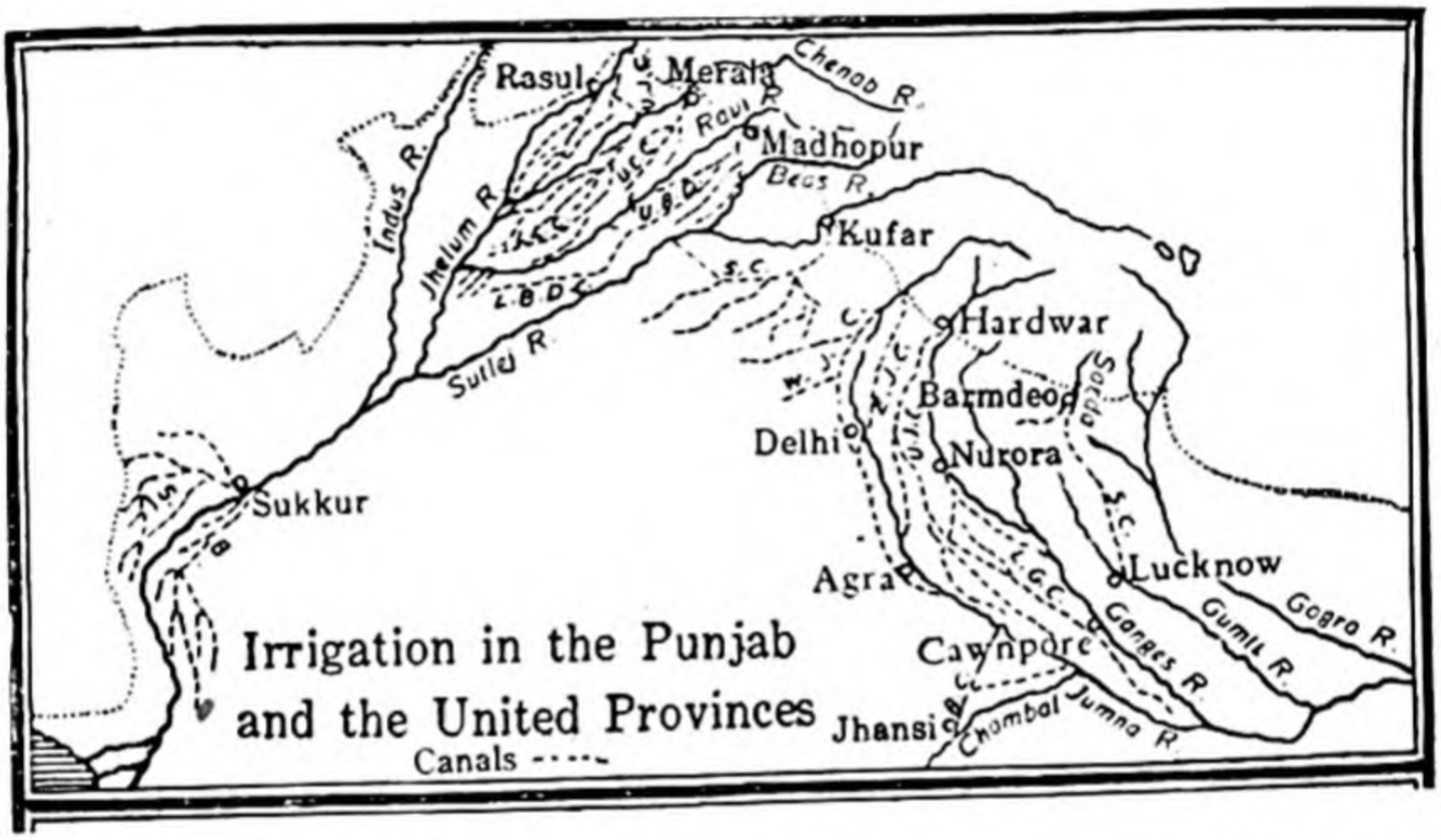
The *three classes* in which Government works have been divided are Productive, Unproductive and Minor. The *Productive* works are those that within 10 years of their construction produce sufficient revenue to cover their working expenses and the interest charges on their capital cost. Most of India's biggest irrigation systems like the Ganges Canals belong to this class. The *Unproductive* (or Protective as they were called till 1921) works are primarily intended to protect the areas of precarious rainfall and to guard against the expenditure on famine relief which will otherwise be necessary, and they are not expected to be directly remunerative. *Minor* or *Non-capital* works are those for which no capital account is kept, like the inundation works of the Indus. The average area irrigated during 1937-38 by productive, unproductive and minor works was 24·4, 2·8 and 3·5 million acres respectively.

The total capital outlay in the works has steadily risen to be Rs. 150·3 crores in 1937-38. The gross revenue for the year was Rs. 1351 lakhs and the working expenses Rs. 462 lakhs, the net return on capital being 5·91 per cent.

Types of Canals

There are three types of canals which have been introduced in the different parts of India. The *inundation* canals which irrigate lands in Sind and the Punjab obtain water from a river when it is in flood and its water-level reaches a certain point. These canals are, therefore, only seasonal in character. The *perennial* canals which are to be found in the United Provinces, the Punjab and Madras are drawn from a river which flows throughout the year. They are constructed by putting some sort of barrage across the river so as to divert its water to the land to be irrigated. The Sukkur Barrage (1932) which has

been constructed by throwing a barrage across the Indus has converted inundation canals into perennial canals, thus conferring a great economic benefit upon the rainless land of Sind. The *storage works* canals which exist in the Deccan, the Central Provinces and Bundelkhand are constructed by throwing a dam across a valley to store the rain-water and then by leading the water so stored by means of canals.



§ 5. **The Punjab Canal Colonies.**—Vast areas of what was once a treeless waste land between the rivers Jhelum and Sutlej in the Punjab have been reclaimed and converted into a rich and flourishing region by canal colony system introduced in the eighties of the last century. This wonderful transformation has been achieved with the help of the Lower Chenab, Jhelum and Bari-Doab canals. Formerly the country was empty, wild and desolate due to meagre and precarious rainfall, and before people from the congested areas could be induced to settle here, many difficulties had to be overcome. The land was levelled, had to be cleared off wild growth and water-courses had to be made. It was then systematically

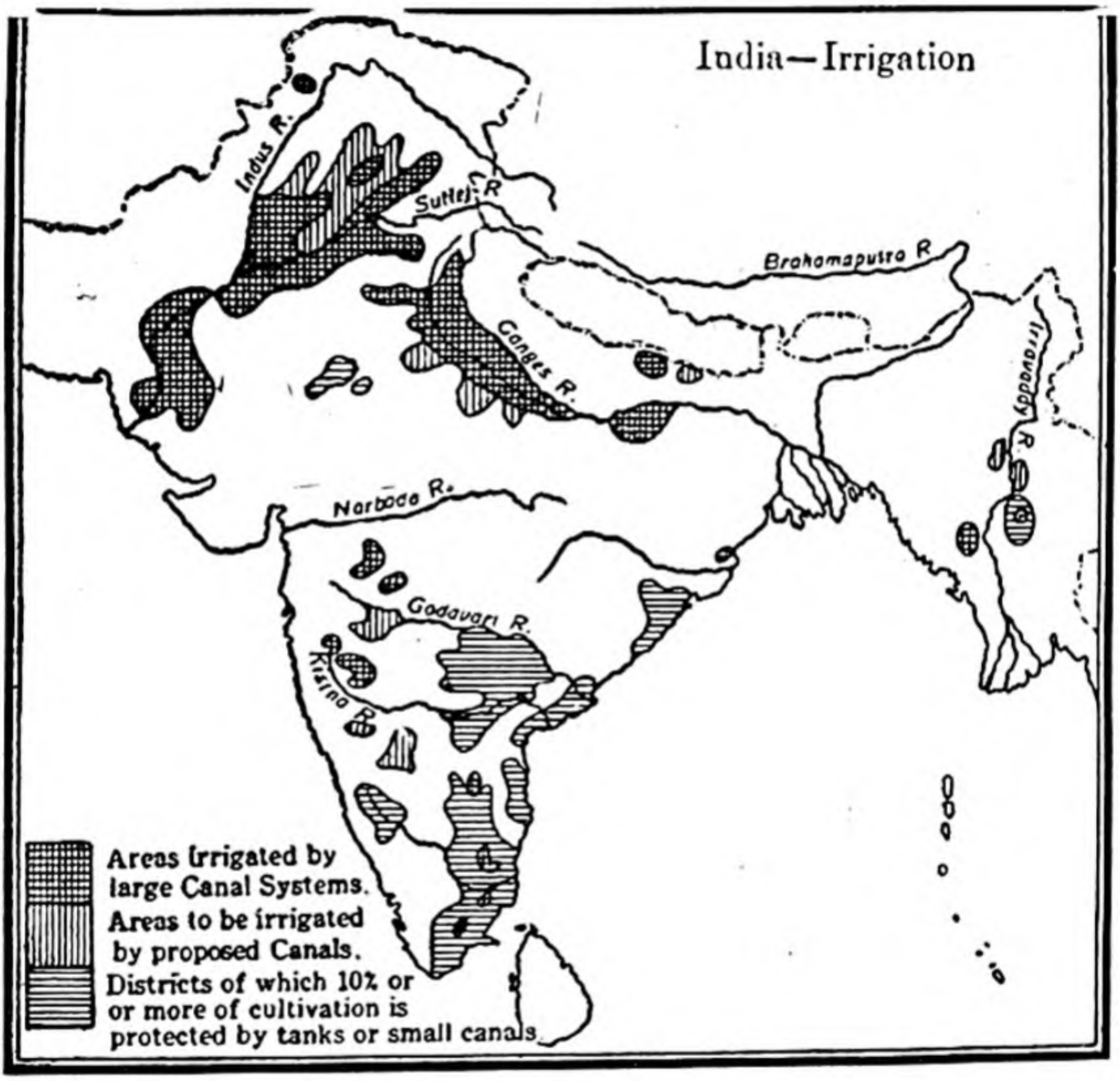
planned into villages and colony tracts. The land in each colony was divided into squares and triangles, roads were marked and boundaries of the villages demarcated.

Then the colonists were carefully selected in the congested areas from among the occupancy tenants and landlords, and to them was allotted the bulk of the land in the form of " peasant grants." These grants were made to well-to-do hereditary landlords and enterprising men and also in recognition of the past services rendered to the Government. The colonists belong to either the class of small peasant-proprietor who was allotted one and a half to two squares or about forty to fifty acres, or the farmer receiving four to five squares, or the landlord receiving up to 20 squares. The backbone of the canal colonies is the class of peasant-proprietors who hold nearly four-fifths of the land and are regarded as among the most progressive farmers in the country. The scheme covers about five million acres of land comprising the colonies of Lyallpur, Shahpur, Montgomery, Jhang, Sishai, Sohajpara, Chunian, Upper Chenab and Upper Jhelum of which the first four are more important.

Great progress has been made in the art of cultivation and agricultural organization including the consolidation of holdings and various cooperative enterprises. The standard of living of the people has been considerably raised and an era of unprecedented prosperity opened for the province. A number of commercial and industrial towns has sprung up, congestion removed from the neighbouring districts of Jullundhur and Hoshiarpur and a net profit of over Rs. 2 crores brought to the Government.

Though in Sind the ordinary land revenue assessment includes also the charges for water, and in parts of Bombay and Madras different rates of land revenue are applied accordingly to whether land is irrigated or

not, over the greater part of India water is paid for separately. The area actually irrigated is measured and the rate is charged per acre according to the crop raised. The areas which are higher than the canal water-level and which have to be irrigated by lifting water by the cultivators, are charged lower rates than the area irrigated by " flow."



The rates vary from province to province and often in case of different canals in the same province. In the Punjab they range from Rs. 7-8-0 to Rs. 12 per acre for sugarcane, from Rs. 4 to Rs. 7-8-0 per acre for rice, from Rs. 3-4-0 to Rs. 5-4-0 per acre for wheat, from Rs. 3 to Rs. 4-4-0 per acre for cotton and from Rs. 2 to Rs. 3-4-0 per acre for millets and pulses. In

the United Provinces they vary from Rs. 9/- per acre for sugarcane to Rs. 3/- per acre for millets for flow irrigation; only half of these rates are charged where lifting of canal water is necessary. Taken as a whole, irrigation is offered on easy terms and the water rates represent only a very small portion of the extra profit which the cultivator secures owing to irrigation facilities. Yet if the principle of 'No crop, no charge' be adopted more extensively and water charges promptly reduced or remitted in times of deficient harvest or crop failure, most of the present complaints against the canal system with disappear.

§ 6. **Wells.**—Wells come next to canals in importance, irrigating 13·8 million acres of land. There are 25 lakh wells in India representing about Rs. 100 crores of investment. Well is an important feature of the Indian village and an extremely efficient instrument of irrigation. When the cultivator has to raise every drop of water which he lifts from varying depths of wells, he is more careful and avoids waste in its use as against the tendency of over-irrigation by means of canals. If this tendency of over-irrigation is persisted in for a number of years, land loses its fertility and becomes barren. There is no such danger inherent in well-irrigation. Again, it is estimated that lands irrigated by wells produce at least one-third more than the canal-irrigated lands, though it is true that wells cannot irrigate as extensively as the canals, and owing to the cost of lifting, well-water is generally used for high-grade crops. But the cultivators do not always get canal-water as much and whenever they need while the well-irrigation is free from these handicaps. Wells at the same time represent the farmer's permanent improvement in his land and raise its value.

Varieties of Wells.—Wells in India are of every description, varying from mere holes in the ground to serve temporarily to the *pucca* wells lined with timber,

brick or stone. The methods of lifting water are also as numerous. Wells with high water-level are worked with *picottah* or 'dheki,' while for deeper wells are used 'mot' or 'charasa' hauled up by bullocks or buffaloes, the latter system being unsurpassed in efficiency. There is also the Persian wheel, an endless chain of earthenware pots running round a wheel. Recently attempts have been made, particularly in Madras, to replace bullocks by mechanical power, while in the U.P. the Government is encouraging the construction of tube-wells to utilize deep water. Part of the expenses of sinking the wells is advanced at low interest to an individual zemindar or to a group of farmers intending to construct a tube-well, and cheap motive power from the Gangetic Canal Electric Grid System is available at one anna a unit for working it. These facilities enjoyed by the western districts of U.P. will also be brought within reach of the eastern districts on completion of the Sharda Canal electricity scheme.

§ 7. **Tanks.**—Tank-irrigation is practically unknown in the Punjab and Sind, but it is found in one form or another in all other provinces, its highest development being visible in Madras. The Indian tank may vary from a great work like Lakes Fife and Whiting in the Bombay Presidency or the Periyar lake in Travancore, holding up from four to seven billion cubic feet of water irrigating groups of villages to the little village tank irrigating ten acres. Tanks date back to a very early stage in Indian civilisation and some in Madras are said to be over 1100 years old. According to the latest figures, the area irrigated from about 40,000 tanks is 6·2 million acres but in many cases the supply of water is extremely precarious. They are often useless in times of scarcity of rainfall or famines as the rainfall does not suffice to fill them.

A comparison of the acreage of crops matured

during 1937-38 by Government irrigation scheme will be found interesting.

Province	Area Sown In lakhs of acres	Area irrigated by Govt. works. In lakhs of acres	% of area irrigated to area sown	Cost of construction of Govt. works. In lakhs of Rupees	Value of crops raised with the help of Govt. works. In lakhs of Rupees
Sind	54	49	89·2	3001	1028
Punjab	316	123	38·8	3586	4032
Madras	369	76	20·5	2025	2198
N. W. F. Province	25	4·6	18·3	321	139
United Provinces	355	52·	14·3	2940	2239
Orissa	65	3·8	4·7	330	128
Bihar	193	6·6	3·4	356	275

§ 8. **Advantages of Irrigation.**—

1. Irrigation renders tracts of uncertain and inadequate rainfall fit for raising crops. The vagaries of Indian monsoons are well-known and irrigation is their only remedy.

2. Irrigation has made possible the growth of two and even three crops where only one flourished formerly.

3. The cultivation of such important commerciai crops as sugarcane in the scorching heat of the summer months has become a possibility with the help of artificial irrigation.

4. Arid and semi-desert lands like the colonies in the Punjab and Sind have been reclaimed and rendered fit for agriculture.

5. It has brought about a more equitable distribution of population. The excess of population of the more congested areas has moved to the new canal colonies and thus the pressure on land has become even.

6. Plentiful and timely irrigation has raised the productivity of land and thus added to the prosperity of rural area.

7. Due to increased productivity land has become more valuable and the cultivators can get better credit on its security.

8. Canal-irrigation raises sub-soil water-level and thus renders well-irrigation easier.

9. Greater farm produce has resulted in the increased demand for transport facilities, and it has consequently added to the railway earnings.

10. The means of irrigation bring in a net income (5·9 in 1937-38) to the Government by way of charges for water and have also resulted in greater land revenue by increasing the productivity of the soil.

§ 9. **Disadvantages of Irrigation.**—Many serious disadvantages may flow from irrigation if not properly utilized.

1. As the charges for water are determined according to the extent of area watered, the farmers have a tendency to over-irrigate their lands. This over-irrigation makes the land water-logged, interferes with the soil aeration and hampers the growth of the plants.

2. Excessive and frequent canal-irrigation results in the deposition of certain white salts on the soil thus rendering it too alkaline for cultivation. The deposit of *Reh* has made barren vast tracts of land that were once fertile.

3. Over-irrigation without proper drainage renders the climate of the region damp and moist thus making it liable to the ravages of malaria and other fevers.

§ **10. Scope for Irrigation.**—The provision of suitable irrigation facilities to the agriculturists is a matter of utmost importance, and though considerable progress has been achieved in recent years, much remains to be accomplished. Plentiful supply of water is an insurance against drought and famine to which one part or another of the country is a victim almost every year. The available means of irrigation

serve just under one quarter of the area under cultivation from year to year and all of these means are not thoroughly dependable. The remaining three quarters of the cultivated land still depends on the undependable vagaries of the monsoons. The agricultural economy of the country is, as a consequent stands in a precarious position. And as agriculture is still the basic industry of the country on whose prosperity our 80% majority of the country directly depends, and which is the core of numerous small and big scale industries by supplying them round materials, and which feeds a big part of inland transport, it can be stated with full justification that in the absence of adequate irrigation facilities the prosperity of the country can never be secure.

Nor is there any time which can be visualized when the importance of agriculture will diminish. Even if the pace of industrialization attained during this war is maintained for some time to come, most of the increasing growth of population will have to fall back upon agriculture as a means of its subsistence. And then there is the neeassity of growing more food and bringing additional acres under the plough for future requirement. Hence both from the point of view of today and tomorrow, the need of irrigation facilities for agriculture will remain imperative.

Apart from Bengal Assam and Sind, there is no other province where the existing irrigation facilities may be considered adequate. And the Punjab, the home of canal colonies is no exception to it. And Indian states sadly lack in them though they constitute more than one-third of the Indian surface. Ofcourse, the nature and type of the means of irrigation will vary from region to region according to the nature of the soil, source of water and rotation of crops followed therein. The Northern plains can do with a few more canal systems but the tube wells will solve their problems more efficiently and more *economically*.

The States of Central India need more plentiful supply of water because of sandy soil and only canals can serve them fully, but because of lack of snow fed rivers, they too will have to tap the subterranean water by tube wells. The Deccan, as has been explained earlier has no alternative but to expand its tank-irrigation system though in the extreme south and in the Eastern Coastal strip canals as well as wells can serve the purpose.

EXERCISES

1. Name the various forms in which capital can exist. How far is India equipped with production capital? Consider the part capital plays in the agricultural industry of India.

2. Show the relative importance of capittal in the hand-loom weaving and the cotton industry of India. What type of capital should our cultivator possess so as to be successful in his occupation?

3. Estimate the economic importance of cow to India. How do cattle affect the material prosperity of a country ? Will horses not be a good substitute for bullocks in this country?

4. What is the necessity of irrigation in India? Describe the types and extent of irrigation facilities that exist in your province. What benefits does the cultivator enjoy form them?

5. Show how irrigation is an important factor in India's rural economy. What are the different forms of irrigation prevalent in India? To what extent can irrigation facilities be extended?

6. "India cannot be entirely protected from famines by means of irrigation works." Examine this statement. What measures would you recommend for bringing about an improvement in the agricultural yield.

7. Describe the irrigation systems of the Punjab and Sind, and distinguish between the methods of water-supply. Why are some canals run at a profit while others at a loss?

8. Describe the benefits of irrigation works to India and the scope of their future extension. Will you develop the means of irrigation or railways as a famine fighting weapon in India?

CHAPTER VI

EFFICIENCY OF THE FACTORS OF PRODUCTION WITH REFERENCE TO INDIA

Productive efficiency of a factor of production depends on the contribution it makes to the joint output of wealth. Its efficiency is high or low according to the amount of wealth that can be attributed to it. If a plot of land, that receives a certain number of ploughings, waterings and other care, yields greater amount of grain than what another plot of land of equal area yields on receiving the same attention, it is said to have greater efficiency in production as compared to the other. Similarly, if of two labourers working with the same quality and quantity of raw material and tools, one produces more than the other, the former is regarded as more efficient than the latter. Similar argument holds good in case of the productive efficiency of capital goods.

Efficiency of one factor depends on the efficiency of other factors with which it is combined in production. If of the three factors, land, labour and capital one is comparatively less efficient, it will bring down the efficiency of other factors. Highly skilled labour and most up-to-date machines employed on a poor-quality land will not produce as much as when employed on a superior-quality land. 'A bad workman quarrels with his tools' is a well-known proverb; but a bad tool also hinders rather than improves the efficiency of labour or land. The efficient combination of factors is the work of efficient organiser. Good organisation increases the efficiency of all the factors of production, while the result of indifferent or poor organisation is low efficiency of the factors.

§1. **Efficiency of Land·—**

Agricultural Land.—Efficiennncy of Land for agricultural purposes is judged by its productivity which depends on the *fertility* of the soil, *climatic conditions* and *situation.*

(*i*) *Fertility* is a question of richness of organic and inorganic matter in the soil and the mechanical composition of the ingredients. It is the result of natural agents like water, wind, heat and light though to some extent it is modified by human efforts. The fertile Gangetic basin is the work of the Ganges and its tributaries; and the rich black cotton soil is the gift of the volcanoes. This natural fertility of the soil is improved by scientific cultivation like the use of chemical manures, better artificial irrigation facilities, better rotation of crops, dry farming etc.

(*ii*) *Climatic conditions*, if unfavourable, reduce the natural fertility of the soil to a great extent. A dry climate like that of the Western Punjab has turned the alluvium of the region into a semi-desert while the excessive rains in the East Bengal have made the country swampy and unfit for cultivation. A fertile soil can yield rich returns only if it is assisted by favourable climate. Man can now-a-days avert, only to a small extent, the climatic disabilities by irrigating the dry areas, draining the swamps and preventing fog and frosts by scientific devices.

(*iii*) *Situation* is almost entirely the result of social progress. By the construction of roads, railways and canals, the lands situated at inconveniently long distances have been brought nearer to the markets. Thus their efficiency is increased as their produce can be more profitably sold. In these days of world-wide markets, situation plays a prominent part in determining the efficiency of land.

Residential and Industrial Land.—Efficiency of land used for residential and commercial purposes

depends on the *economy* with which it is used. In big towns and cities, with growing industries, land has come to acquire very high value. It is scarce, and to make the best use of it strict economy is observed in its utilization. In congested areas tall buildings have been erected to increase the floor area. The sky-scrapers of big cities are very prominent examples of the economy of land. Even in much smaller towns the ground-floor of a house is used as an office of a shop while the upper storey for residential purposes. It is the result of economy in the use of land that has led to the construction of hanging railways of Berlin and underground railways of Paris and London.

§ 2. **Efficiency of Capital.—**

Capital by itself cannot produce, as it is lifeless. It is used either as raw materials which are to be changed into the finished commodity, or as tools with which labourers work in production. Much depends on how a tool is being used, and whether it is suitable to the purpose in hand and also whether the raw materials are of good quality and utilized without waste. Thus the efficiency of capital is a question of its *suitability* and *proper use* by efficient labour.

If a workman knows his job and has been trained in handling delicate and costly machines, he will make the best use of them, at the same time avoiding breakage or excessive wear. But a bad workman will sooner do some damage to the machine and possibly to his person. It is proverbially true that a bad workman quarrels with his tools. Much waste of raw material and damage to machines and loss of time may follow an inefficient use of costly and delicate machines working on valuable raw materials. The efficient use of these tools and instruments depends upon the efficiency of labour with which they are combined. A poor and out-of-date machine, likewise, is a hindrance to the productive efficiency of the

worker. In order to help and speed up production, machines must be of *good quality and suited to the purpose*. A blunt knife will not serve so well as a sharp one; also a sharp sword will be a poor substitute for a screw-driver. Moreover, it is more economical to use a costlier machine with comparatively a greater efficient working in place of a cheap and old-fashioned one that is cheap in the beginning but costly in the end.

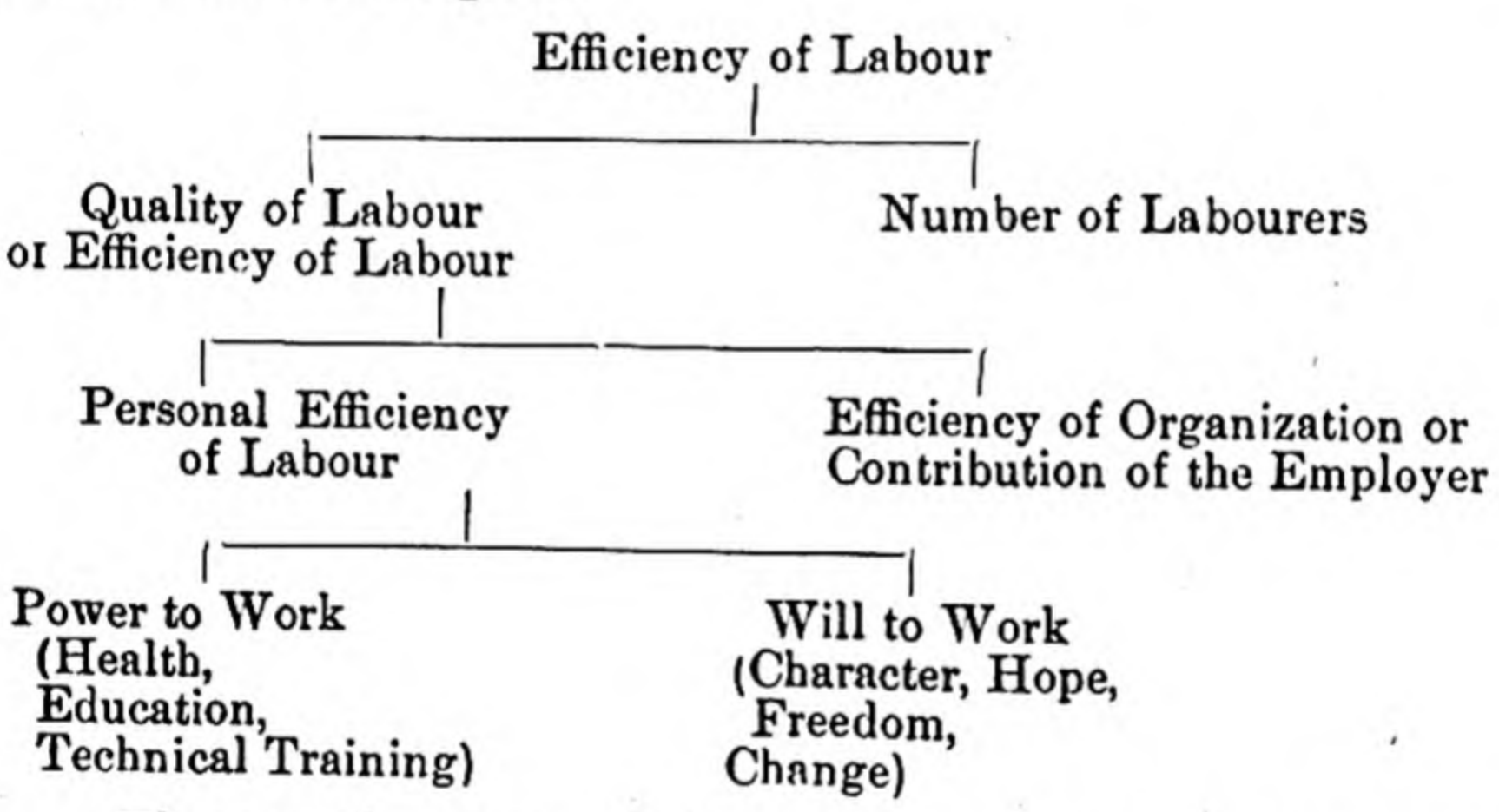
Strict economy is needed in the use of raw material. In the first case no leakage or waste should be permitted, though insignificant it may look in the beginning. But if waste is unavoidable as resulting from cutting, shredding, cleaning and other ways the waste should be utilized in bye-products. Waste cotton in a cotton mill is generally turned into yarn for rough *durries*; the shreds of wool in an woollen mill are used in making felt articles; the molasses of sugar mills is turned into spirits; and ashes from the engine-room utilized in buildings.

§ 3. **Efficiency of Labour.**—

Skilled and unskilled labour.—Labourers are roughly divided into two classes, *skilled* and *unskilled labourers*. When a labourer is called unskilled or inefficient, it is not meant that he is good for nothing; it means that at a particular task he is not as good as he is expected to be, or that there are workers who are more skilled at a job than this particular individual. An unskilled weaver can weave but not so well nor as quickly as another who is more skilled in weaving. Both working for the same number of hours and with the same kind of raw material and tools, the unskilled one will produce a fewer yards of cloth than the skilled one will do. It means, therefore, that an unskilled worker is not absolutely worthless but is less efficient than the so-called skilled worker.

This does not imply that there is no average or standard worker on whose comparison it may be decided whether a worker is skilled or not. By observing a large number of labourers working under the same set of conditions, a certain amount of work of a quality can be fixed as the standard work. If a labourer comes up to this standard, he will pass as a skilled or efficient worker, and if he fails to accomplish the standard work, he will be called unskilled.

For a clear understanding of the factors on which the efficiency of labour depends the following chart will be helpful:—


Efficiency of Labour
Quality of Labour or Efficiency of Labour
Number of Labourers
Personal Efficiency of Labour
Efficiency of Organization or Contribution of the Employer
Power to Work (Health, Education, Technical Training)
Will to Work (Character, Hope, Freedom, Change)

The productive efficiency of a nation will depend upon the efficiency of workers and the number of such workers busy in productive activity. The question of number of labourers is a question of population which has been discussed in a preceding chapter. Here emphasis will be laid on the quality of labourers.

Efficiency of labour, which means the power of a labourer to create wealth, is the question of his personal efficiency as much as that of the help he gets from other factors in any productive activity. His personal effort needs be supplemented by the efforts of the organizer under whom the labourer works, as it is the organizer who looks to the supply of other

factors of production in co-ordination with which the labourer works in modern industrial production. Thus the question of the efficiency of labour resolves itself into two: To what extent does a labourer's efficiency depend on his *personal efforts* and *qualification*? and, to what extent is he assisted by the contribution of the employer?

Personal Efficiency.—Personal efficiency is made up of the labourer's "power to work" which is a question of fitness and his "will to work" which depends upon his temperament and outlook on life.

Power to Work

Health.—Health is the basis of all activity. People who enjoy sound health and live long, put in more work in the long run than those whose span of life is short and even then is interrupted by periods of illness. Healthfulness depends upon the constitution that one inherits from his parents and also upon his upbringing in childhood. In youth and manhood it becomes the concern of the workers themselves to maintain and improve their health. Nourishing food suitable to the nature of work a labourer has to perform, and regular exercise go a long way towards keeping a sound body. Family life, social customs, and one's company exercise their influence on his health.

Climate.—Then comes the climate of the place and the surroundings of the factory or workshop where the worker works. A cold climate makes a person healthy and active, but a very cold one is enervating and makes out-door work impossible. A warm climate is not necessarily unfavourable to hard work, but it creates an inclination to be lazy and sedentary. Temperate climate is the most conducive to hard work and takes out the best efforts of a labourer.

Education.—Every work requires both physical and mental effort. Intellectual vigour is largely the result of education. Any activity, that quickens one's power of observation, sharpens his wits, refines his imagination and helps him to form accurate judgment, can be called intellectual training. This is received in the family, in the school, and the wide world where a demand is made on one's mental faculties to cope with situations arising almost every moment in one's life. This education gives only a *general training* in developing mental faculties.

Technical Training.—This training in a special line of activity has acquired a great importance in modern industry. This is an age of specialization and a labourer works at a single process and that too a minute one. The raw material passing through his hands is often costly, and the implements, with which he works, delicate. Then there are ins and outs of an occupation and secrets of a trade which one does not learn through general education but only through long periods of apprenticeship with those who are experts in their line.

Will to Work

Character.—Good moral character is another factor which determines the efficiency of a worker. If a labourer enjoys sound health, works in temperate climate, and has received both general education and technical training, he may be expected to be capable of doing his job well. But whether he does it well, will depend on whether he has a character or virtues of self-reliance and self-respect, honesty and industry. A worker, who feels his responsibility in completing his assignment, who works as hard in the absence of his boss as in his presence, and who takes interest in his task because he is paid for that, certainly deserves success and will attain it. It is a question of having a will to do a task when he has the power to do it.

Outlook on Life.—In addition to all this, there are certain conditions of work, mental outlook, ambitions, want of restrictions and variety in life, which are very favourably conducive to the growth of productive efficiency.

Hope.—Hopefulness for rise in grade and pay, for extra remuneration on doing excellent work, and for growth of self-respect and social ambitions, adds zest to one's work.

Freedom.—Freedom from narrowing influence of customs and prejudices and from the oppressing sense of inferiority and subordination, induces a man to work harder and better than what he will do if he is mistrusted and constantly driven to work against his will. It is abundantly clear that a man, who realises his responsibility, is a better worker than a slave who has no personal interest in the task.

Change.—Change in associations and surroundings, in life and work, keeps a man cheerful and buoyant in spirits. Dullness and monotony of life often kill initiative and enterprise, and blunt the creative power and imagination without which a worker is no better than a lifeless machine.

§ 4. **Efficiency of Organization.**—The efficiency of organization is judged by the final results of production. The ideal of production is the creation of the maximum wealth with the minimum of effort. Thus an organization that manages business with a greater approach to this economy of effort is more efficient than another which cannot effect so much economy. This economy of effort depends on the efficiency of land, capital and labour, and the way they are combined together to some consequence. Land and capital are subordinated to labour in production and, therefore, it can be said that the efficiency of organization depends on the degree to which it succeeds in utilizing and increasing the efficiency of labour.

The generally low standard of living of the workers is responsible for poor diet, insufficient clothing, damp and dark tenements in the congested, ill-ventilated and insanitary *bustees* and *chawls* which are such a prominent feature of industrial towns like Cawnpore, Calcutta and Bombay. The awful slums where labourers reside, are the breeding-grounds of disease, crime and immorality that sap the strength and reduce the efficiency of the workers. Cheap and low recreations with drink as the only means to drown the miseries of abominable living conditions shatter their health and reduce their stamina. The one result of all this is very low efficiency indeed.

The migratory character of factory labour, that is drawn from agricultural areas during the off-seasons when agriculture offers little occupation, is another factor explaining the inefficiency of our labourers. Their stay in the factories is only temporary as they return to their land from time to time and thus the continuity of training is broken and skill has to be acquired afresh.

Inefficiency of Organization.—The lack of high-class managing skill and organizing capacity among our organizers is also responsible for low efficiency of labour. The machines supplied by them are sometimes obsolete and even second-hand—the import of rejected sugar machinery from Java is an instance—and they are not always the best and most suitable. It is time they realized that the employment of cheap and out-of-date machinery is at the best a false economy.

Again, they are responsible for the unhealthy surroundings of the factories, and bad ventilation and insanitary working conditions inside the factories. Though the hours of work have been considerably shortened, their arrangement is nonetheless defective. Two periods of short rests with light refreshment will prove more recuperative than one long break.

Making arrangements for healthy recreation and physical and intellectual advancement of the workers by providing labour clubs, reading-rooms and gymnasia is once again their responsibility. It will keep the workers away from undesirable associations, increase their efficiency and ultimately benefit the organizers themselves.

Inefficiency of Farm Labour

The farm labourer is in certain respects less fortunate and in certain others more fortunate than his brother in the factory, yet on the whole his efficiency too is unsatisfactory.

His conditions of work in the open fields are more hygienic yet the scorching heat of summer and biting cold of winter impose a heavy strain on his physique. His great success in enduring these is not due to better diet or more sanitary housing conditions of the village but to cleaner atmosphere of the countryside unpolluted by the soot and smoke of factory chimneys. His life is more regular though duller, more peaceful though less exciting, and this saves him from falling a prey to evil consequences of low amusements and sensuous pleasures of the industrial towns.

In the matters of general education he is less fortunate, while technical training he receives none. He entirely depends upon the traditional knowledge handed down from generation to generation embodied in the maxims and proverbs and learns a little from the members of his family and personal experience.

The raw material used is indifferent in quality and tools and instruments decidedly primitive with the consequence that though agriculture has been the main industry of the country from times immemorial, the inefficiency of farm labourers is classic.

His conservatism and fatalism are well known. The farmers all the world over are noted as conser-

vative but the Indian farm worker beats them all. The evidence is seen in their faithful observance of agricultural processes adopted thousands of years ago with the resultant inefficiency. A deep faith in the immutability of fate has left them devoid of all incentive and hopefulness and they feel resigned to their lot without attempting to improve it.

Conclusion

These reasons have led certain critics to observe that the inefficiency of Indian workers—both factory and farm—is their national characteristic. Of course, it is not true if it is meant to imply that their efficiency cannot possibly be improved. An Indian worker is more a victim of circumstances, both social and industrial, than a branded incompetent person beyond hope. His inefficiency is more due to lack of facilities for education and training, inefficient organization, defective and inadequate labour legislation, low wages and lack of union. Where given the opportunities for work and experience, he has shown himself wonderfully adaptable and has often surpassed his foreign competitor.

EXERCISES

1. Clearly define 'efficiency.' Can you not judge the efficiency of a factor of production independently of other factors? Way?

2. What are the factors on which the efficiency of land depends? How far is man responsible for the present efficiency of land?

3. Describe the various methods of economising land both in town and country. In what way does capital affeit the efficiency of land?

4. What is meant by the efficiency of capital? Suggest the lines on which the efficiency of capital used by a farmer can be improved.

5. On what does the efficiency of labour chiefly depend? How does the employer contribute to the efficiency of labour?

6. How is the efficiency of labour affected by education—(*a*) general and (*b*) technical? Are labourers entirely dependent upon the employer for their efficiency?

7. Analyse the conditions which are responsible for the efficiency of organization. How does the organizer bring about the efficiency in production?

8. What are internal and external economies? Which of these are more important in modern industry and why?

9. What are the chief causes of the inefficiency of Indian labour? Suggest suitable remedies to improve their efficiency.

CHAPTER VII

DIVISION OF LABOUR AND LARGE-SCALE PRODUCTION

1. Division of Labour

§ 1. **Meaning of Division of Labour.**—The splitting up of a task into its sub-processes and the performance of each process by different individuals is called *Division of Labour*. In division of labour, production is essentially undertaken by a group of people. There is no division of labour in the productive effort of the cobbler who himself prepares a pair of shoes from beginning to end though he does it by gradual processes. This is an individual activity and hence no division of labour is possible though there is the partitioning of the entire task into several processes. Likewise, a carpenter's work from the felling of a tree to the finishing of a table does not imply division of labour if he performs all this labour unassisted by any other individual.

But every group-production is not necessarily a productive activity conducted on division of labour. A dozen men rolling the playground with a heavy roller have no division of labour among them; they are all doing the same thing collectively. In other activities of lifting, dragging, pulling or pushing a heavy load, where more men are required as the task is beyond the power of an individual to perform, there is no division of labour as all the members of the group are doing the same thing. For division of labour to take place, a task must be divided into several processes and at each process should be engaged different men, not because all the processes cannot be performed by one man but because the task is more efficiently performed if arranged in this manner.

Division of labour means specialization of work. The simplest form of this specialization is seen in a family where male and female members take up different duties of the household. In agricultural families, the males perform out-door operations on the fields while females keep the home. Even the lads help their parents in doing odd jobs such as looking after the bullocks or watering the fields. Factory-production furnishes numberless illustrations of division of labour. The entire work is divided into separate departments like engine-room, spinning, weaving, bleaching, calendaring, stores, sales and others in a cotton mill and then in each department are seen workers engaged in different portions of a single process. A modern mill or a factory is nothing but the embodiment of the spirit and the forms of division of labour.

§ 2. **Forms of Division of Labour.**—There are four forms of Division of Labour :—

1. Occupational or industrial division of labour.
2. Division of labour into complete processes.
3. Division of labour into incomplete processes, or technical division of labour.
4. Territorial or geographical division of labour, or localization of industries.

1. *Occupational Division of Labour.*—In society, outside the family, the whole business is kept running by different people specializing in different services required by the community. Some produce the grains to feed it; some weave to clothe it; some build to house it; some make furniture to furnish homes or make tools and instruments needed in agriculture and industry; some train the children to bring them up as worthy citizens; some preach while other heal them. In short,

3. *Division of Labour into incomplete processes or technical division of Labour.*—Specialization went further and the result was that even a complete process was split up into many sub-processes and these came to be taken up by different individuals or groups of producers. The various operations performed by different men in growing cotton are a matter of common knowledge. Each of the processes, ginning, spinning, weaving and tailoring is finished in many sub-processes. In tailoring, for example, are included measurement of body, cutting the cloth into pieces, stitching them in parts, sewing, buttoning, ironing, and fitting. Similar is the case with ginning and spinning and weaving.

The basis of this form of division is a careful study of the worker's capacity to do a certain task with the requisite tools and instruments and under an expert management. A standard or average amount of each kind of work is fixed which a workman of average efficiency is expected to do. And then the business of the employer is to see that each worker does only that job, and nothing else, in doing which he is most efficient and which he does at least up to the standard, if no better.

4. *Territorial Division of Labour.*—This means the distribution of industrial workers over different regions which are best fitted for them owing to certain industries being located there. England specialized in machinery, Germany in chemicals and France in wines. In India, Bengal is noted for Jute production, Gujarat is the home of cotton, and the U.P. and Bihar are the centres of sugar industry. Specialists or experts in a particular industry will be found to have settled down in the areas meant for the industry.

§ 3. **Advantages of Division of Labour.**—Specialization is the foundation of productive efficiency. *A man being canstantly employed at a small task becomes master of it in course of time.* By doing the

groups of people contribute in their own way towards maintaining the social structure intact and strengthen it. These various occupations, which were brought into existence in early times by social, religious or political requirements, have since become hereditary and formed the basis of Hindu castes. Caste-syetem, looked at from this point of view, has done much good to society, and this sort of occupational caste-system has been in existence in almost all the races, not to speak of the Hindus alone.

2. *Division of Labour into complete processes.*—With the progress of society and growth in its economic needs, specialization in occupations was carried on still further. A single occupation was broken up into several processes which could be completed in themselves by groups of people working independently of other groups. The supply of cotton cloth is done in four big stages—growing of cotton, ginning and spinning, weaving, and tailoring—each of which is performed by agriculturists, spinners, weavers and tailors respectively. In making a door plate, complete processes like mining, smelting, rolling and smithery are required; so also lumbering, sawing and actually turning a piece of wood into a table in carpentry. Though each of these processes is composed of numerous sub-processes, they, as complete processes, are performed by different groups who may be even unaware that all of them are putting forth productive efforts that are directed towards making one and the same thing. A miner may refuse to see beyond his nose and assert that as far as his job is concerned, it is over as soon as he brings the iron-ore from the bottom of the pit to its mouth. He is not wrong. The same claim may be made by labourers working in a foundry, or in a rolling mill or in a workshop. But to satisfy our want for a door plate the efforts of all these people working at complete processes have to be coordinated.

same thing day after day, eyes and hands get accustomed to manipulate the raw material and the tools in a way which becomes almost automatic. And being so reduced, it loses much of its strain on the nerves and muscles of the labourer for whom *the task becomes simpler and lighter*, however complex and difficult it might have been in the beginning. Again, there are specialists in different branches of medical profession, specialists in law and in teaching as in a branch of trade and industry. All these specialists are working on the basis of division of labour.

There is a saving of time and its better utilization in division of labour. If a labourer is employed in more than one process, he will do a job for some time, leave it with the raw materials and the tools he has been using there, move to another spot where he has to take up another job for which he requires a new set of materials and tools. This moving away from one job to another involves a waste of time which would be better utilized if the labourer is consantly employed at the same task.

A task, complex when considered as a whole, becomes easier when it is divided into numerous subprocesses. The very essence of division of labour lies in reducing a complicated task into parts at once simple and easy to perform so much so that each process consists in simple vertical, horizontal, or rotatory movements. As these simple movements can easily *be taken up by machines, the introduction of machines becomes a possibility.* There are machines that very skilfully perform tasks too complicated, too fine or too minute for human muscles. But the intention is to emphasize the fact that the simpler a process is, the greater is the possibility of its being taken up by machines.

The introduction of machines renders the task of the labourer much easier. The monotonous, hazardous and strenuous task is done by machines and the

strain on the muscles and brain of the labourer is lightened, whose duty remains simply to watch the machine that actually works. Only when something goes wrong with it that he stirs himself, sets it right and then once again begins to watch its working. In cotton mills employing automatic looms, the weavers can talk to friends or read a book while the loom weaves merrily on till it suddenly stops because a thread of the warp is broken. After the necessary adjustments have been made, the machine resumes its work and the workers begin to chat. Again, a hammer weighing several maunds can be worked with the help of a mere lever controlled by a worker, or tons of load can be removed by a crane under the control of a man sitting in a cabin high above. Machines thus relieve the workers of much of their trouble and strain and render their task easier and pleasanter to do. At the same time, the machines demand greater energy, intelligence and sense of responsibility in the workers that use them, which fact leads to an increase in their wages.

Division of labour levels the barrier between different trades that require the emloyment of machines. Though machines differ in different industries, the principles governing their work are almost identical. In some cases the machines intended originally for a particular service may be used for a totally different purpose after making slight changes in them, as machines used in making type-writers can be utilized in making guns; consequently it is easy for a worker employed in one trade to move from it to another trade.

By constantly watching a machine at work, a labourer may hit upon a device to improve it or get an idea of a new type of machine that may perform the same task much more easily and quickly. Some of the most useful inventions have resulted from such an intelligent observation and interest that the work-

ers have felt in their machines. Thus *the division of labour leads to many useful inventions*.

It may also be added that *division of labour affects a great economy in energy*. Every man can be assigned a task that is suited to his individual capacity—intelligence, strength and application—and he is employed there constantly so that no waste of energy is allowed.

Hence it is evident that the efficiency of productive effort is greatly enhanced when division of labour is introduced.

§ 4. **Disadvantages of Division of Labour.**—*The degradation of the workman is a direct result of division of labour* and mechanization of production, as in constantly repeating a simple process the workman is reduced to a purely mechanical rôle. He becomes an automaton working as stolidly and lifelessly as a machine does. It is undoubtedly a painful experience for him to realize at the end of life that all the time of his working hours he had done nothing except driving nails into the soles of shoes or sharpening the points of pins or making a tiny wheel of a watch. But work as such, if honestly performed, is never degrading, but is dignified; and dignity is not lost if it has been a man's business to do a simple little process all his life. He is a unit in a group of producers, and if any credit goes to the group for its productive efficiency, the individual must receive his due share. Even without division of labour certain duties are 'degrading' just as the work of a sweeper or of a stone-breaker, or of a road-worker who handles the ramrod. The division of labour with the help of machines has improved the lot of such workers rather than degraded them any further.

The monotony in repeating a single process not only makes a worker stupid and ignorant but also deprives his life of all pleasure. Though this is true, the labourer needs not be discouraged. Nowadays

machine workers work for 40 to 54 hours a week and get high wages. They can very well employ their increasing leisure hours in arranging games and sports, running clubs and libraries and reading-rooms, learning music and dancing, or cultivating some of the fine arts as painting, and thus by introducing change in their daily life they can make it pleasant and overcome the monotony of working hours. Even some of the employers undertake to provide a change and variety in the life of their employees by helping them in arranging their recreations. Under these circumstances it is futile to say that machine work renders a man's entire life dull and monotonous.

It cannot be denied that *a workman loses his position of being a producer of a complete article.* However efficient in his particular process, his efficiency can be marred or maintained by the work of those that precede and follow him. A weaver may have his task rendered difficult and inefficient if the spinners have not twisted the yarn well, or if the bleachers or dyers spoil the texture of the cloth. *The extreme dependence of a workman on other members of the group makes his position unstable and precarious.* But spread of education and trade-union movement among workers are making them realize that they belong to the same class of workmen and that their poverty or prosperity depends upon mutual actions, and that they should perform their task honestly to save others from suffering the consequences.

2. Machinery

The present stage of economic development is justly called the 'factory stage' or, the 'machine age.' Since the commencement of the Industrial Revolution machinery has come to be extensively employed and plays a dominating part in productive processes. And the termination of its progress is by no means in sight. In agriculture, in transport, in domestic and manu-

facturing industries, and even for consumption purposes in our households, the machines are becoming more and more indispensable. With the better utilization of the sources of motive power, the machines have succeeded in almost transforming our entire economic organization.

§ **5. Advantages of Machinery.**—(i) Machine is the greatest ally that man has in his struggle against nature. Nature yields her resources grudgingly and man unassisted with machines could never have succeeded in exploiting her with his puny strength.

(ii) In the economic field, the greatest benefits have resulted from the Division of Labour which could not be introduced in modern production without the help of machines.

(iii) Machines have lent tremendous efficiency to man's productive efforts by increasing the speed of work and reducing the time required for different processes, and can create wealth at an amazing pace. Instances illustrative of the wonders of the machine age are too common to enumerate yet to the reader may be suggested an example of the printing machine that prints, folds and delivers 120 complete copies of the Weekly Illustrated per minute. How much of human efficiency will be needed to acquire this period if it were at all possible for human beings to attain it.

(iv) Large-scale production has become possible with the help of the machines and due to economies resulting from it the cost per unit of things produced has been greatly reduced. Thus have been brought within the reach of even poor people articles that were once the luxury of the rich.

(v) By performing difficult, heavy and arduous task like cranes lifting weights, engines pulling trains and hydraulic hammers beating steel girders to the thinness of wires, the machines have relieved the strain on human muscles.

(vi) They have also taken up the monotonous tasks which consist in the mere repetition of very simple processes like driving nails into the soles of the shoes and thus relieved the factory labourer of much of the monotony of his life.

(vii) Machinery has also undertaken to perform those degrading and disagreeable tasks that are so injurious to human health and dignity, like the duties of scavengers.

(viii) It has widened the outlook of labourers by giving them opportrunities to exercise their intelligence and resourcefulness.

(ix) It has helped the labourers to earn higher wages and thus raised the standard of their living and generated in them the sense of dignity and self-respect.

(x) It has increased the mobility of labour; that is, the labourers can now move from one occupation to another with the ease and rapidity that was impossible before. The machines have been standardized and the principles of their operation being identical, the labourer can quickly pick up a new task on account of his similar experience at his old job.

§ 6. **Disadvantages of Machinery.**—But the advent of machinery has not been an unmixed blessing. There are always two sides to a picture and machinery is by no means an exception. People have denounced machinery as a source of many evils that have caused tremendous misery and sufferings among the labouring-class people. The following are the main disadvantages attributed to machines:—

(i) Machinery displaces labourers and creates unemployment among them with the attendant poverty and sufferings.

(ii) It degrades labourers to the position of machine-feeders or machine-tenders with no initiative and no liberty left to them.

(iii) It has driven out of existence the handi-

craftsman who prided himself on his individualistic workmanship, and reduced him to the level of the common worker without any interest in his work.

(iv) It has led to physical deterioration and moral depravity among labourers because of their too frequent association with women and children employed in factories.

(v) It is responsible for the evils of the factory life with its insanitary dwellings, unhygienic working places and crowded cities full of dirty slums and drinking booths, and has thus brought diseases, epidemics and death to countless people.

(vi) It has led to over-production of goods thus flooding the market with cheap produce causing severe cut-throat competition resulting in the loss and bankruptcy to many. Machinery thus causes disintegration in the economic structure of the society.

(vii) Machinery is being looked upon as a tool of the 'capitalist' class for the exploitation of labour because, though machines shorten the hours of work, the intensity of labour is increased and it extracts out of labourer the utmost of which he is capable.

(viii) It has disturbed the harmony of social life by causing 'strikes' and 'lock-outs' thus creating bad blood and spirit of antagonism among different section of population.

This is a formidable list of accusations but they lack the solid justification they seem to possess. It is not intended to suggest that the above objections to the employment of machinery are baseless but after making allowance for these disadvantages there will remain a net surplus of benefits and blessings that machinery has conferred upon mankind.

It is a fact that machinery displaces labour in the short period as it does the work of many labourers, but it also creates compensating employment at other places like the workshops where these machines themselves are made. Again, because of machines, pro-

duction is taken up on large scale with low cost, and the commodities being cheap are demanded more, and employment for labour is created in new factories. And finally, because people are able to purchase these machine-made goods at less expense, they have more money left to be spent on other commodities whose increased production creates fresh employment to labourers.

There is some truth in the statements that the individuality of a worker is lost and he loses his independent occupation and becomes a feeder of the machine that produces common and standardized articles of dull uniformity. But thereby the productivity of labourer and his wages are increased. And though his life during the factory hours may be exacting and monotonous, with his increased income and longer leisure he can afford refreshing and healthy recreations that were formerly beyond the reach of his paltry earnings.

As for the evil consequences of opposite sexes huddled together in the factory or the mines, the evil is being removed by labour legislation, and with growing educational facilities and economic prosperity, the children will better utilize their time in schools and women in their homes. The congestion in factory towns is a serious problem which will continue to tax the resources of the public health authorities. A few 'garden cities' like those of Britain and America may serve as good pointers in the right direction but they cannot prove the panacea for crowded cities.

Over-production and consequent loss of balance in the economic structure is not the fault of machinery but that of the organizers who fail to study the market, and in their anxiety to get rich quickly produce more than the requirements of the consumers.

As for the disturbances caused by the strikes and lock-outs, machinery with the employment of armies

of labourers has incidentally created opportunities for these but the real cause is the lack of right understanding between the employers and the employees. If both the parties realize the identity of their mutual interests, look upon themselves as cooperators in the common task of production of articles for the benefit of the society as a whole, and with a little give-and-take spirit have confidence in the good intentions of each other, these industrial disturbances will be a matter of the past.

The benefits of the machinery are too many to be enumerated and the number of the evil consequences attributed to machinery is also large. But as explained in the preceding paragraphs, the evils are not so much caused by machines as by the lack of understanding and mutual sympathy between people who are concerned in the employment and handling of these machines, and men failing to retain their humanity and becoming the slaves of machines. With the growth of education among the labouring classes, a little less selfishness among the employers, a greater recognition of mutual economic dependence among both, and a growth of social consciousness among reformers and government bodies, these evils will soon be wiped out.

3. Localization of Industries

§ 7. **The Causes of Localization of Industries.** —. *Physical and climatic conditions.*—The most important cause of localization of industries is the suitability of physical and climatic conditions. Agricultural specialization like jute in Bengal, Bihar and Orissa and cotton in the black-cotton-soil region of Gujarat and Berar, is entirely determined by the texture of the soil and the temperature and rainfall in these areas.

In manufacturing industry also like cotton, in the Bombay island the humidity of the atmosphere is a

great contributory cause, as it prevents the yarn from frequent breakings in spinning and weaving.

The coal and iron mining in the Gondwana region is influenced by the geological factors.

2. *Supply of raw materials*.—An organizer will start his factory in the heart of vicinity of the region where the required raw materials are available, because it saves him their cost of transport. The concentration of jute mills in Calcutta, cotton mills in Bombay, sugar factories in East U. P. and Northern Bihar, and iron and steel works in South Bihar are good examples.

3. *Supply of power*.—Coal is the most important source of motive power these days and the availability of coal has determined the location of iron industry in Tatanagar and Asansol. The cost of transport of coal being heavy the organizers prefer to locate their works near the coal-mines. The development of hydro-electric power will in the future encourage the establishment of industries in those regions where this power will be available.

4. *Supply of skilled labour*.—It is cheaper in many cases for factories to be situated in a district where skilled labourers are found rather than take them to far distant places as labourers do not often like to leave their homes. The presence of big numbers of brass workers in Moradabad and weavers in Benares and neighbouring districts serves as strong attractions to employers to start new factories in these areas.

5. *Patronage of courts*.—Many industries like ivory and *zari* works of Delhi, scent manufacture of Kanauj and Jaunpur, silk works of Benares and *chikan* of Lucknow owe their localization to the patronage enjoyed by these products from the kings and courts in the Middle Ages in these cities.

6. *Momentum of early start*.—An industry tends to develop and remain concentrated at a locality

where it was started for whatever reason. It serves as a pull upon both the employers and the employees.

7. *Accessibility to markets.*—Often such sites are chosen for the establishment of industries which stand in the middle of the region and from where the finished articles can be quickly and cheaply distributed. Cawnpore and Delhi with their cotton, sugar and leather works are good illustrations. They lie neither in the cotton-growing nor in the cattle-growing regions. Their only claim to industrial prosperity is their matchless central position for the distribution of finished products.

8. *Means of transport.*—Their importance in determining the localization of indusrties is unique and is growing with the improvement and efficiency. In these days of international trade and commerce the localization of special industries in different countries is maintained because quick and cheap transport makes interchange of products possible.

§ 8. **Advantages of Localization of Industries.**—Many advantages flow from the localization of industries:

1. *Perpetuation of efficient labour.*—Localization of industries means concentration of labour in those areas. It not only attracts suitable labour there but the children of the labourers being brought up and educated in the industrial atmosphere pick up the rudiments of that particular job at an early age and later on maintain and improve upon the parental skill.

2. *Market for labour.*—Labourers seeking employment gather there and the employers wishing to employ that kind of labour also visit the locality for the recruitment of labour. It is convenient to both the parties.

3. *Growth of subsidiary industries.*—Subsidiary industries grow up to utilize the products or by-products of the main industries. The tin-plate and

barbed-wire industries as subsidiaries to Tata Iron and Steel Works, durry and tent making to cotton mills at Cawnpore and paper making to the mills at Bombay are good instances.

4. *Growth of supplementary industries.*—Sometimes supplementary industries are started in the locality. Engineering works at Cawnpore have prospered because other mills and factories provide them plenty of scope for work.

5. *Greater employment.*—The establishment of subsidiary and supplementary industries increases employment of labour. At the same time the women and young members of the family secure some work in the lighter industries and add to the family income of the labourers, thus raising their standard of living.

6. *Greater external economies.*—These are possible as the factories and mills have ample chance of co-ordinating their activities of purchase, sale and repairs from common agencies at economical rates.

7. *Chances of improvement.*—Serious competition among neighbouring factories induces their owners to invent new processes and improve organization with the result that industry as a whole progresses.

8. *Growth of trade and commerce.*—The place acquires a reputation and goodwill for the local products, like the brasswares of Moradabad and silk goods of Benares, and heavy sales are made. Organizations are started for the supply of raw materials and tools and instruments needed in the industry. Banks and credit houses are opened to serve the mills, and fire and accident insurance companies grow up to take up insurance business.

§ 9. **Disadvantages of Localization of Industries.**—1. *Risk of serious economic sufferings.*—Due to complete dependence on one industry, the labourers are likely to suffer wide-spread miseries if the industry falls a victim to economic depression or

other serious accidents. All of them will lose their only means of subsistence and will be unable to move to a new industry.

2. *Narrowness of human skill.*—The localization of industry over-emphasizes a particular type of skill and by confining the labourers' creative energies in narrow groves prevents their full development. They are apt to think of their limited interests in a particular type of work.

3. *Chances of lower standard.* If only one type of industry, like iron and steel, is localized at a place giving employment to only sturdy and strong men, other members of their family may have to remain unemployed for reasons of their weak health, tender age and female sex. The burden of their maintenance on the slender incomes of individual heads of famiiles will tend to lower the standard of living.

4. *Evils of factory-system* like congestion, over-crowding, insanitary living, high rents along with dirt, disease and drinks are likely to adveresly affect the health and morals of the workers.

Large-Scale Production.

§ 10. Meaning of Large-Scale Production. The advantages of specialization are realized more and more if the number of labourers engaged in a particular industry increases, as the scope for the introduction of division of labour is greater where the labourers employed are more numerous. To provide work to a large number of workmen, a large number of tools and machines is necessary along with a large quantity of raw material and the use of motive power. To house this large number of labourers and large machinery and large quantity of raw material and finished commodity, large buildings are required. And then the organizing unit has to be large in order to judiciously combine these factors

and work them efficiently to produce things at a low cost. The finished commodities are meant for sale and, when these commodities are in large quantities, the liability to make a profit or suffer a loss is also great, that is, risk-taking or enterprise is also needed on a large scale. In short, the entire productive scheme has to be undertaken on a large scale.

Large-scale production is another name of *concentration of employment*. This concentration of employment is met with in mills and factories, in commercial enterprises like railways and shippings, storage and distributing agencies, and in farming, mining, forestry and fisheries. The essence of large-scale production is the concentration of the factors of production on a large scale with or without the use of motive power. A silk workshop in Benares run on those lines will be as good an instance of large-scale production as cotton mills or woollen mills at Cawnpore, though it depends entirely on manual labour while the latter predominantly employ power-driven machinery. But the large-scale production as found in modern industries is essentially the result of the *factory-system*, the two main features of which are the use of power-driven machinery and mass production on standardized lines.

§ 11. **Economies of Large-Scale Production.**— Just as efficiency is another name of division of labour so economy is another name of large-scale production. The wonderful efficiency of modern production is attributed to division of labour; similarly, the great and varied economies of production known as internal and external economies have resulted from production on large scale. These economies are so effective and are enjoyable in such a measure that the organizers have a tendency to increase the scale of their business at the earliest opportunity.

A study of these economies can be made according to the stages of production—*Pre-factory stage*

dealing with the purchase of raw materials, tools and instruments, and employment of labourers; *Factory stage* with the division of labour and other economies possible in the process of changing the raw material into finished articles; and *Post-factory* stage when the finished articles are sold off. Below are given the economies resulting from the use of several factors of production. As will be apparent from the following discussion, the greatest economies of large-scale production are the economies of capital, which make the cheap production possible:—

1. *Economy of labour.*—Economy of labour is a very important item of the economies possible in large-scale production. It has been pointed out before that the skill of a labourer becomes most productive when he is employed at a very simple process and constantly at that process alone. This condition is fulfilled more in large-scale production where a more minute sub-division of labour is possible than in a small business. If two businesses, employing, say, 20 workmen each, are combined into one, production will be more than doubled due to the introduction of a more perfect division of labour and a better use of time.

2. *Economy of Land.*—There is a greater economy of land or space in a large business than in a small one. If the business is doubled in scale, the accommodation required for labourers and machines can be doubled at a comparatively little cost. Up to a certain height, a new storey built does not cost as much as the lower one; the amount of material needed in construction is less; and here is no increase in rent payable for the building site. Even if greater surface area is hired, the rate of rent charged is considerably lower.

3. *Economy of capital.*—Economy of capital is the biggest economy in large-scale production:

(i) To start with, the *use or generation of greater power* costs less per unit, as it is a matter of common

experience that a twenty horse-power engine will neither cost twice as much as ten horse-power engine, nor will it consume double the quantity of coal or oil or electricity required to run it.

(ii) *The employment of machinery* in modern industries is increasing day by day, but it is possible only for large-scale business to go in for the latest design of machines available in the market and to introduce them in every process of production where machines can possibly be introduced. The small manufacturer will do much of his work with manual labourers. New processes and new machines result from experimentation which a small producer cannot afford, but which forms a part of permanent establishment of big businesses.

(*iii*) *Economy in the use of raw material* also is affected in large businesses. If one cap can be prepared from a certain piece of cloth, in preparing fifty such caps less than fifty times as much cloth will be required. The waste involved in cuttings is eliminated and time required in making, planning and cutting is appreciably reduced.

(iv) If accumulated in large quantities, the *waste material can be utilized in one way or the other*. If the quantity is small, it cannot profitably be sold away nor can arangements be made in the factory itself to produce any thing from it on economical lines. A big cotton mill can spin the waste cotton into yarn to be used for durries and carpets, but a small mill cannot afford to set up a fresh machine for this purpose. A big sugar mill can profitably work a distillery to produce spirits from *rab*, and a large woollen mill can have a department to utilize the cuttings and shreds of woollen pieces and yarn in making felt caps, hats and blankets.

4. *Economy of organization.*—The *economies of buying the raw materials and selling finished commodities* figure prominently in large-scale businesses.

Wholesale rates are lower than the retail ones; bigger discount and commission are allowed on heavy purchases; transport agencies permit *higher rebates* on heavy and bulky traffic; and *greater credit* for longer periods is allowed on large-scale buying. If the scale is big enough it pays to *produce the raw material* also as the profits on raw material going to other producers and middlemen are eliminated. It will be cheaper for a rolling plant owner to own iron and coal-mines, to own a fleet of lorries or a small train to carry the raw material from the pits to the workshop. A sugar factory can likewise prosper more if it owns the surrounding area and grows sugarcane there.

Intensive advertisement and canvassing can easily be undertaken on lower cost. A small *printing press* will do the necessary service for bills and posters, and even if advertisements in newspaper have to be necessarily inserted, the hire charges for more space are comparatively lower. Packing departments and *distributing vans* will reduce the selling expenses, while larger quantities of the stock will provide better opportunity of *choice and selection* to the buyer and result in heavier sales. In a variety of articles a buyer will more probably find a thing suited to his taste and purse than in a stock offering less variety. At the same time a big business can afford to create new *varieties* and, by appealing to the taste of the buyers, can mould it in its favour. A small business will find such a step too risky and beyond its means. Finally, the cost of production being lower, a large-scale producer can sell his goods at a lower price and by *quick turnover* make heavy profits.

§ 12. **Limitations of Large-Scale Production.**— Economies of large-scale production are great and varied. The result is that it offers a strong inducement to the producers to take resort to it specially when competition among them is keen to capture a limited market. Or, a producer may like to enjoy lower

cost of production and thus desire to increase more and more the scale in order to reap greater economies. The danger in such cases lies in the fact that *the sale of the business might be increased much beyond the capacity of the market to consume* the entire produce. The commodities that are produced are meant to be sold away, and there will be no gain increasing the quantity of an article, however low its price in the market, if its entire amount cannot find enough purchasers.

Again, *there is not much scope to increase the scale of a business where the producer has to attend to individual customer and satisfy his personal taste or requirements.* A photographer may occasionally get a chance to print a large number of copies of a certain picture, but usually a small number of copies of a photo is required by a customer and consequently it will not pay him to maintain a big establishment. In tailoring business, where every customer has different means, tastes and bodily measurements, there is not much chance to have production on a large scale.

Production on large scale may not be economical if the raw material used in it is precious and the need for strict personal supervision of the employer at each step is great as in diamond cutting. A jeweller's business likewise needs be run on a small scale as the quantity and the quality of an ornament required by customers vary enormously.

Then there are certain industries like *agriculture* that *do not allow much scope for* the economies of division of labour and *large-scale production.* Work being seasonal and scattered over a large area, it is difficult to introduce effectively the division of labour, and to easily supervise the work of labourers. It is admitted that agriculture as an industry can employ a large amount of factors of production but not so much as is possible in manufacturing industries.

Finally, it is seen that when *the application of labour and capital is increased beyond a certain limit, production becomes rather uneconomical*, because the tendency of *returns to diminish* sets in.

EXERCISES

1. What is meant by 'division of labour?' Distinguish it from simple cooperation of labour. How does it lead to:
   (*a*) the economy of time and tools?
   (*b*) the employment of the cripple and the blind?
   (*c*) the invention of machinery?
2. Describe the various forms of division of labour, and express your opinion with regard to the following statement:—
   'At one time the caste-system could be defended as based on the principle of division of labour, but now with the advent of machinery the caste-system is more a hindrance than a help.'
3. Examine the advantages of division of labour and weigh them against its disadvantages. What steps do you propose to be taken by the labourers and their employers to mitigate these disadvantages?
4. What is 'territorial division of labour ?' How is it brought about and what are its advantages and disadvantages?
5. Has the employment of machines been an unmixed blessing? Discuss the advantages and disadvantages of the use of machines.
6. What do you understand by 'large-scale production?' Give example to show the class of industries in which advantages of large-scale production are most marked.
7. Mention the main benefits and limitations of large-scale production. In your answer refer to the industries of the region where you reside, and state whether you would like to see large-scale or small-scale industries developed there and why?
8. Can a producer on a small scale survive against a producer on a large scale? Illustrate your answer by means of suitable examples taken from Indian conditions. Which type of production, large-scale or small-scale, do you recommend for agricultural industry? Give reasons for your answer.
9. Describe the advantages of large-scale production. What large-scale industries, in your opinion, can be advantageously established in your province?

CHAPTER VIII

THE LAW OF DIMINISHING RETURNS

Farmers have learnt from their ancestors' long experience that all the food of the country cannot be raised on a single plot of land even if labour and capital were increased enormously, and that poorer and less favourably situated pieces of land have, therefore, to be brought under cultivation from time to time. On this experience of mankind the economist bases his most celebrated law, the Law of Diminishing Returns.

§ 1. **Diminishing Returns.**—Since time immemorial it has been recognised that a certain piece of land can give but a limited crop and no cultivator, howsoever skilful, can get more than that. Even the maximum quantity of crop is never raised, because there is a limit beyond which the cultivator finds no advantage in proceeding as it does not pay him to take the extra trouble or to incur the extra expenditure. He can certainly raise a bigger crop than the one which he is accustomed to grow only if he cares to plough deeper, use more manure, prepare a better seed-bed, destroy the smallest weeds and protect the harvest from insects, birds and wild beasts so as to minimize the loss; but he knows that the increase in crop thus brought about costs more than it is worth; therefore he never cares to do that. His experience has taught him to realise the potent fact that the output is not necessarily doubled with the doubling of the outlay; that the total output is less in proportion than the cost of labour and capital applied to a certain piece of land.

The economist expresses this simple experience of the cultivator in his own way thus: Suppose a farmer grows wheat and pays the labourers and the

capitalists in kind. He pays the first instalment of 25 seers of wheat to labour and capital which he employs upon his land, and gets a produce of 100 seers of wheat for that cost. Next time he spends 50 seers of wheat to employ more labour and capial to work upon his field and gets, say, 160 seers of wheat. A third time his cost comes up to 75 seers of wheat and the resulting crop to, say, 200 seers of wheat. A fourth time, his cost is 100 seers of wheat and the yield of his field is 225 seers of wheat.

Twenty-five seers of wheat which measure the cost of labour and capital, represent the cost of one unit of productive power which we technically call a *dose* of labour and capital. Hundred seers of wheat were obtained, therefore, from one dose of labour and capital; from two doses of labour and capital, the quantity of wheat obtained amounted to 160 seers. Evidently the amount of 100 seers was due to the application of the first dose of labour and capital and the additional amount of 60 seers was due to the application of the second dose of labour and capital. Similarly, when three doses of labour and capital were applied, the total produce was equal to 200 seers. Therefore the third dose of labour and capital increased the previous total output of 160 seers by 40 seers. In a similar manner, the fourth dose of labour and capital gives 25 seers of wheat. If doses are applied one after another, we may say that the amount of wheat raised from their application is 100, 60, 40 and 25 seers in succession. These successive amounts of produce are the additions made to the total output with every dose of labour and capital applied one after another. They may, therefore, be termed *additional* or *marginal* returns of produce. These marginal returns diminish, as is quite evident from this illustration, with every successive dose of labour and capital.

§ 2. **Causes of Diminishing Returns.**—In agriculture production is limited by the supply of *mineral*

substances. There is present even in the most fertile land only a limited amount of nitrogen, potassium, phosphoric acid, etc., which are indispensable for plant life. Every crop which is taken from the surface of land reduces the quantity of these essential substances and thus lessens the fertility of that piece of land. Hence diminishing returns set in.

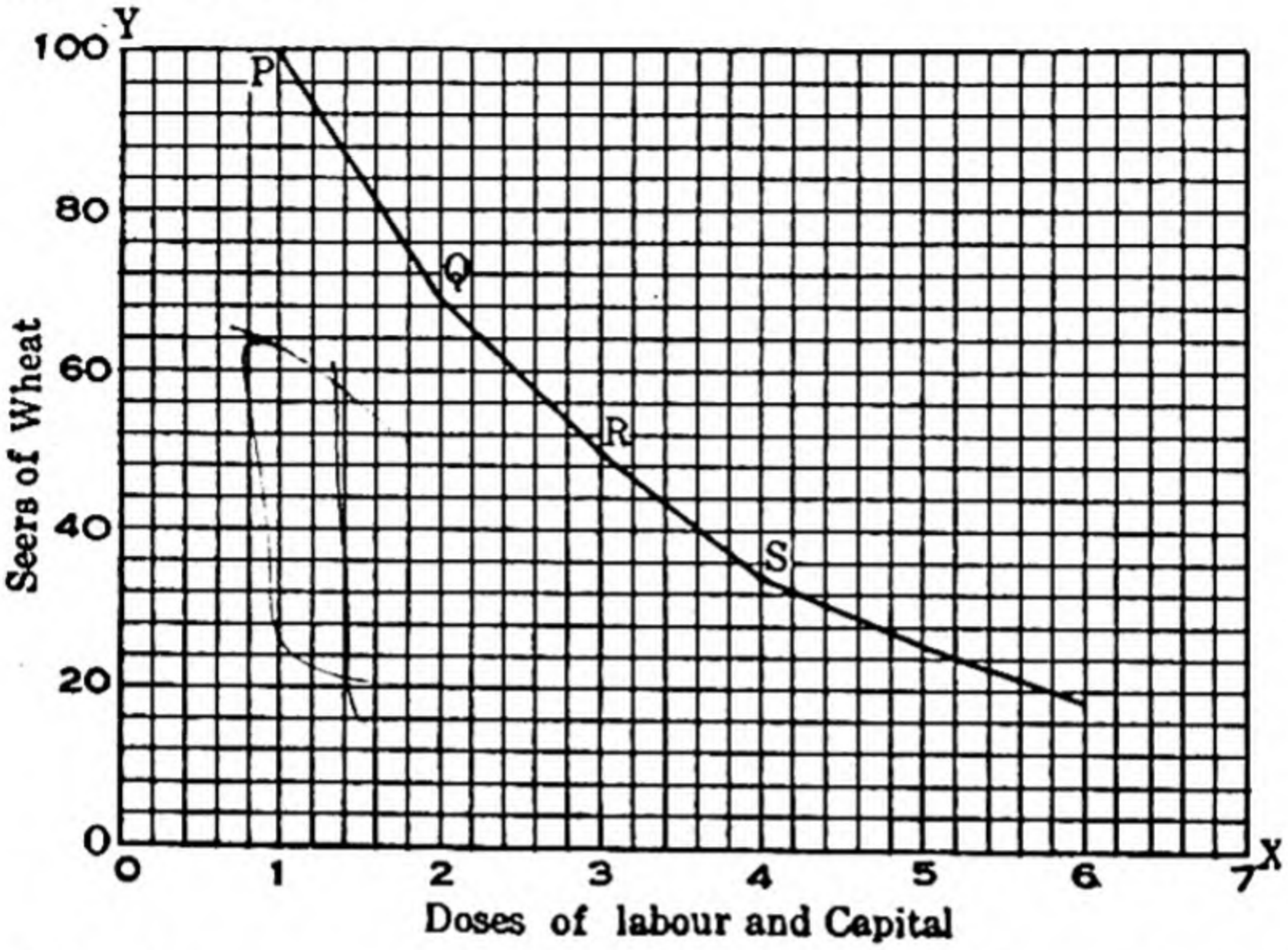
Agricultural produce is also limited by the *time* and *space* necessary for plant and animal life. Man may finish his work quickly but Nature needs time to accomplish her part of the work. For seed to be transformed into ears of corn, months are required, and man has but to wait patiently all that time maintaining himself and his live-stock. Thus labour and capital both have to be fed during this period of enforced idleness. This increases the cost of production or decreases the output per unit of outlay. Again, every plant must have a certain amount of space to spread its leaves and roots in. When all the available space is used up, man has to be content with what little space he can possibly get.

We have seen clearly how the tendency of diminishing returns from land manifests itself with the application of successive doses of labour and capital. This tendency has given rise to the *Law of Diminishing Returns* which may be worded thus:—

As successive doses of labour and capital are applied to a plot of land, the marginal returns of produce generally tend to diminish.

Diagrammatic representation of the law.—The curve of diminishing returns, as is evident from the diagram given below, is very much like the curve of diminishing utility in nature. On the X-axis doses of labour and capital are taken, and on the Y-axis, seers of wheat expressing marginal returns. Successive points are joined by means of straight lines to obtain the curve. Thus point P shows that when the first dose of labour and capital is employed, 100 seers of wheat are produced; point Q shows that when the second dose of

labour and capital is employed, only 70 seers of wheat are raised; and so on.



The law applies not only to agriculture, but also to extractive and manufacturing industries.

§ 3. **The Law as applied to mining and quarrying.**—Mines and quarries are Nature's reservoirs of mineral ore and the quantity of such ore in an area is absolutely limited. The total yield which is stored up in one lot in them can be obtained all at once by applying the necessary amount of labour and capital. In an agricultural land, however, the total yield is not stored up in one lot, so that crops are raised year after year. Mines and quarries are exhausted sooner or later, after which they yield no more. The fertility of agricultural land is also exhausted but land recoups its lost powers and begins to yield again.

Keeping in view this essential difference between agricultural land on the one hand and mines and quarries on the other, we may proceed to consider how the Law of Diminishing Returns applies to mines and qaurries. As more and more of labour and capital is applied to a mine or a quarry, the cost

increases more rapidly than the amount of ore dug out. Sinking of deeper shafts, providing support down below, arranging for light, pumping in fresh air from above, and hauling up of ore and also of labourers mean heavy cost, and the cost goes on increasing with the uccessive doses of labour and capital applied in exploiting the mine. The quality of ore also usually gets inferior, the deeper is the operation carried. This means that a heavier expenditure is incurred to obtain not the uniform quality of ore but an inferior type of it. Hence the returns in terms of money due to repeated application of labour and capital tend to diminish and look much smaller when placed against the heavy cost undertaken to get them. In other words, for the same expense on labour and capital the quantity of produce goes on decreasing rapidly. The tendency of returns to diminish gathers more and more strength as time rolls on and the point of exhaustion draws nearer. Hence mines and quarries are subject to the Law of Diminishing Returns.

§ 4. **The Law as applied to fishing.**—The fishes replenish their store like the agricultural land so that the yield is not exhausted as it does in the case of mines or quarries. The cultivator can draw upon the fertility of only the upper strata of the soil at a time, but the fisherman has a far greater depth to draw upon for his supply of fishes. The chemical properties of the agricultural land are tied down to the soil which is fixed at one place. The reproductive power of the fishes moves about with them and is not stationary at one spot in water.

There is thus a close similarity between agricultural land and fishing areas. Hence the Law of Diminishing Returns is as truly applicable here as it is in the case of agricultural land.

Increased applicaiton of labour and capital to fishing in rivers, ponds, tanks and even lakes yields diminishing returns because of the limited supply of

fish at a locality. As the stock gets exhausted longer lines are required to fish from greater depths and also longer time is needed for waiting for a catch.

§ 5. **The Law as applied to manufactures.**—In manufacturing industries the returns begin to diminish when all the economies of division of labour and large-scale production have been exhausted and no further improvements can be applied. In other words, diminishing returns begin to make their appearance when the scale of the business increases beyond the capacity of the organizer to manage it efficiently.

§ 6. **The tendency of diminishing returns counteracted.**—The tendency of returns to diminish is held in check at least for some time by a change of processes. Thus, man not only catches fishes but also hatches them; he not only fells tree but also plants them. He tries to recoup the loss and thereby retard the operation of the Law of Diminishing Returns. By effecting omprovents in the art of cultivation, he keeps the soil from deteriorating rapidly. Scientific cultivation with a suitable rotation of crops, improved variety of seed, artificial manures, up-to-date agricultural machinery and better drainage resist the tendency of returns to diminish for a time, though it prevails ultimately. Development in the science of mineralogy and improvements in the art of mining are effected only to postpone the operations of the Law of Diminishing Returns in mining.

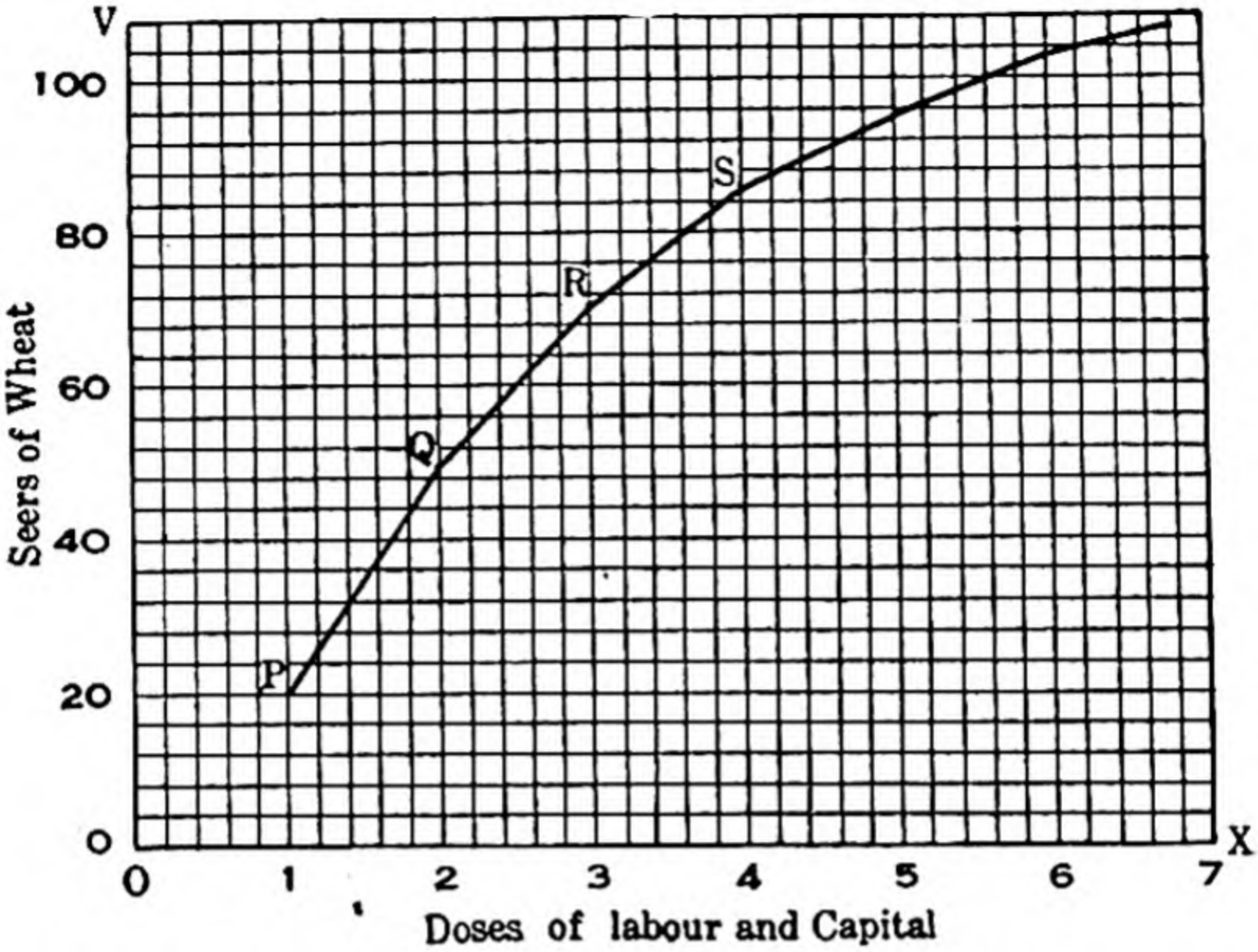
In manufacturing industries, diminishing returns set in a later stage. To counteract the tendency, most up-to-date machinery is made use of, most efficient labour is employed, by-products are not allowed to waste, scale of business is enlarged so as to effect economies, and most efficient organization enforced with a view to lower the cost of production. In fact, all internal and external economies are introduced in order that diminishing returns may not make themselves felt at an early stage.

To reduce the pressure on land, sometimes more land is reclaimed from waste and thrown open for cultivation. The extent of market is widened by improving the means of communication—thus making the produce to find purchasers far and wide. This increases the value of the produce and weakens the hold of the Law of Diminishing Returns on land.

THE LAW OF INCREASING RETURNS

§ 7. **Increasing Returns.**—If labour and capital applied in the beginning are not adequate, increasing returns to doses of labour and capital may precede diminishing returns. In a new country having virgin lands, the first few doses of labour and capital may prove to be insufficient to work up the fertility of the soil to its full. If Nature replenishes her store of fish faster than human agency exhausts it, every increase in the application of labour and capital must yield successively greater produce. Some mines offer least resistance to labour and capital and start to give lavish returns to labour and capital in the beginning of their application. Increasing returns are far more prominent and frequent in the manufacturing industry than in any other industry.

When on more and more of labour and capital being applied in a productive activity, the returns due to successive applications increase, the Law of Increasing Returns is said to be in operation. Supposing the cost of a dose of labour and capital to be 25 seers again as before, the tendency of increasing returns may be illustrated by figures taken in ascending order, such as 20, 50, 70, 85, 95, 102, 107 and 110 seers. The following curve which is constructed with the help of these figures represents the Law diagrammatically.



THE LAW OF CONSTANT RETURNS

§ 8. **Constant Returns.**—In some industries, especially in extractive industries when an improvement *just* offsets the tendency to diminishing returns, it does not give increasing but constant returns. When constant returns are obtained in an industry it is said to be working under the influence of the Law of Constant Returns. If in any productive activity, decreasing returns are balanced by increasing returns, it must yield constant returns. This is generally the case in those industries in which the raw material used is produced under conditions of diminishing returns, and the manufacture of this raw material into a finished commodity is carried out under conditions of increasing returns in such a way that the tendencies of increasing and decreasing returns are equalized to yield constant returns. For example, if a sugar factory produces its sugarcane, in which the law of diminishing returns must necessarily operate, and prepares sugar out of it, which activity must obey the

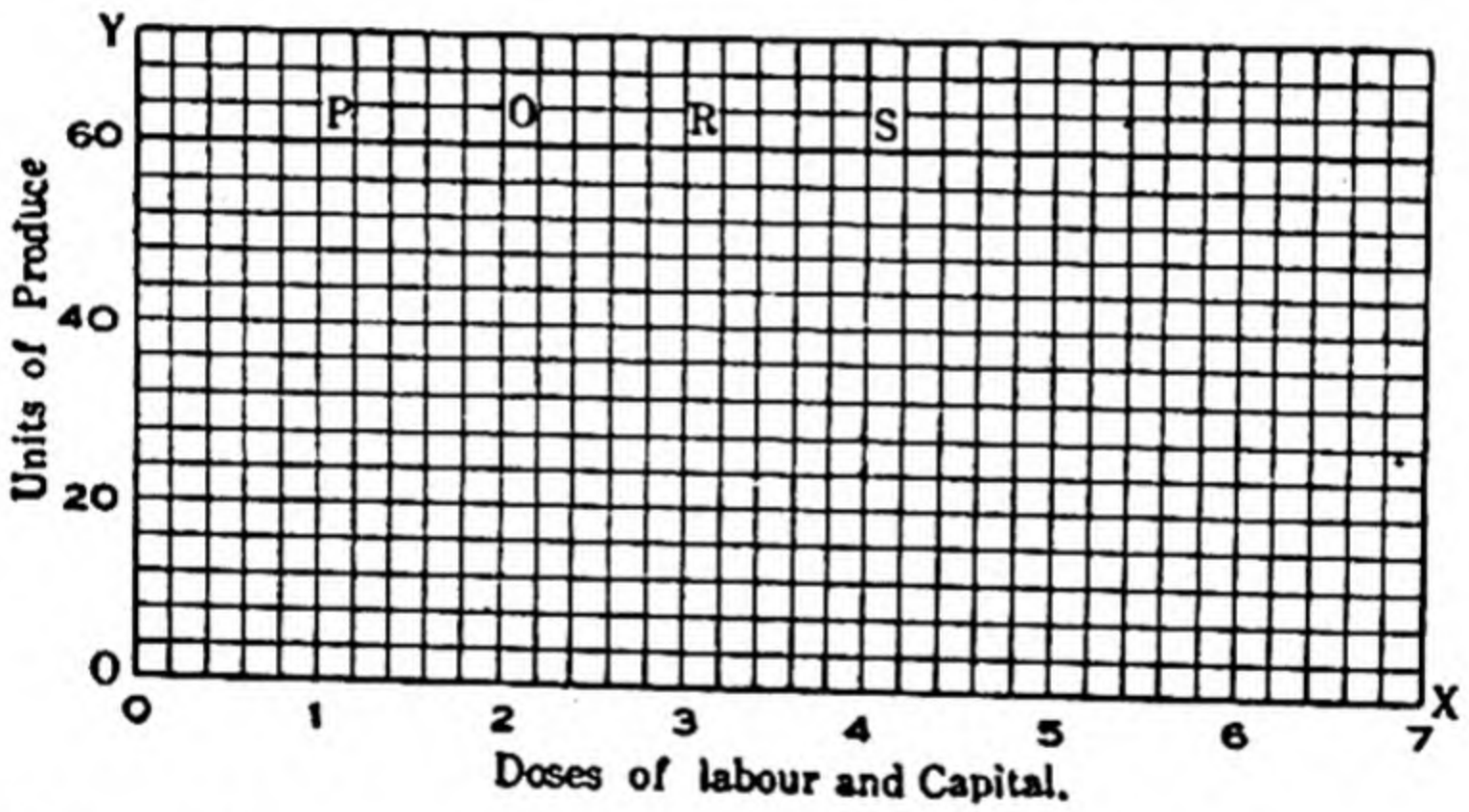
Law of Increasing Returns, the two forces of increasing and decreasing returns may be at work in equal measure so that the returns that result from the entire activity—cane cultivation and sugar manufacture—are just equal to one another. In the steel industry, similarly, the raw material has to be obtained from the mines which are subject to the Law of Diminishing Returns, and the manufacture of iron-ore into steel lends itself to the Law of Increasing Returns. If the two forces are exactly equal and opposite so as to balance one another, the whole production of steel must yield constant returns. The same will hold good in the case of cotton growing and cotton manufacture, or wheat production and flour making.

When constant returns are obtained in an industry, it is said to be working under the influence of the *Law of Constant Returns. This law is said to operate when the application of successive doses of labour and capital is followed by the same increase in output every time.*

To illustrate the law numerically, let us use the figures which we assumed in illustrating the Laws of Decreasing and Increasing Returns. Let us also suppose that the second set of figures represents seers of wheat flour, not wheat. Then the averages obtained from the corresponding figures of diminishing and increasing returns will stand for the figures of constant returns. For example the first dose of labour and capital yields, as we have supposed now, 100 units of wheat and the first dose of equal cost yields, according to our supposition, 20 units of wheat flour; the two doses thus yield 120 units, which comes to 60 units per dose on an average. The figures of averages so arrived at have been set out in the table below:

Doses of labour and capital	Marginal returns of wheat	Marginal returns of flour	Total yield	Average yield
1	100	20	120	60
2	70	50	120	60
3	50	70	120	60
4	35	85	120	60
5	25	95	120	60
6	18	102	120	60
7	13	107	120	60

The above average yield figures resulting from their corresponding doses of labour and capital, when plotted, will give the following constant returns curve:



§ 9. **The Law of Constant Returns is only hypothetical.**—It has been assumed in this law that the disadvantages of the production of raw material are exactly equal to the advantages of manufacturing the raw material into finished commodity. But it is hard to point out cases where such conditions actually exist. The economies of division of labour assisted by the employment of machinery and large-scale production may more than counterbalance the disadvantages of the production of raw material and the net result may be increasing returns. In those indus-

tries that employ comparatively cheap raw material, diminishing returns in its production may not count for much and may be almost negligible as compared to great economies in the manufacturing stage. If it is so, constant returns will not be obtained there.

§ **10. The Law of Diminishing Returns operates in all industries.**—All forms of productive activities obey sooner or later the Law of Diminishing Returns. In extractive industries diminishing returns set in sooner than in genetic industries; so also in genetic industries they set in sooner than in manufacturing industries. If at the start in an industry the units of productive power are insufficient, we get increasing returns first, later when more and more units of productive power are employed, we may get constant returns at a certain stage though only for a short while, yet when the production is carried too far, diminishing returns set in establish themselves. Hence increasing and constant returns do not constitute separate laws by themselves, as it might appear to be the case; they are only exceptions to the Law of Diminishing Returns.

§ 11. **The Law of Equi-Marginal Productivity.**—This law is essentially the same as the Law of Equi-Marginal Utility which goes under a slightly different name in this department of economics. According to this law, the given amount of expenditure is so distributed over the several factors of production that the marginal productivity of each factor tends to be the same. A numerical illustration will suffice at this stage to make the meaning of the statement clear.

If the given amount of expenditure to be incurred is 13 units in all, it will be so distributed among land, labour and capital as to make the marginal returns to be equal to 30 in each case. This is shown in the following table by thick figures. If the expenditure to be distribued is more, say, 19 units, the distribution will be carried out in such a way as to make the

marginal returns to be equal to 20 (shown in italics) in each case as shown below.

Units of Expenditure	Returns (in terms of produce) to		
	Land	Labour	Capital
1	40	50	45
2	36	45	36
3	33	38	32
4	30	35	30
5	25	30	27
6	20	26	20
7	15	20	13
8	8	12	6

If a dose of labour and capital which is applied to land is measured by Rs. 30, this sum will be distributed over labourers, tools and implements and raw material not at random but according to the Law of Equi-Marginal Productivity so as to ensure the greatest advantage. Just as a dose of medicine which does not contain ingredients compounded in their proportion is likely to do some harm to the patient, so also a dose of labour and capital may not yield the desired results, if labour and capital are not combined in the right proportion.

EXERCISES

1. State the Law of Diminishing Returns, giving illustrations, wherever necessary, to make your meaning clear.

Is this Law applicable (*a*) to mining? (*b*) to fishing in rivers? (*c*) to manufactures?

2. Does the Law of Diminishing Returns refer to the amount of produce or the money value of that amount? Explain your answer by means of numerical illustrations. Enumerate the causes of diminishing returns.

3. Explain clearly the following statements:—

(*a*) When successive doses of expenditure applied to an industry cause less than proportionate incre-

ments in the output of that industry, it is said to operate under the Law of Diminishing Returns.

(*b*) If one of the three factors of production—land, labour or capital—remains fixed, the increase of one or both of the other factors, after a certain point is reached, will not return a proportional increase.

4. Draw a diagram to illustrate the Law of Diminishing Returns. Are there any exceptions to this law? How can you hold in check the tendency of diminishing returns?

5. State the Law of Increasing Returns, and explain how increasing returns result from division of labour, from specialization of machinery and from the extension of facilities for transportation on a large scale.

6. Consider the part played by internal and external economies in bringing about increasing returns in industry. Show that greater external economies are likely to lead to greater internal economies.

7. With the aid of numerical example, explain the Law of Constant Returns. Discuss the importance of law in practical life. Draw a curve to illustrate diminishing, increasing and constant returns and mark out on it the position of constant returns.

8. Is it true to say?

(*a*) "While the part which Nature plays in production shows a tendency to diminishing return, the part which man plays shows a tendency to increasing return."

(*b*) "So far it appears as if there were one law for agriculture and one for manufacture, returns tending to diminish in the one type of industry and to increase in the other."

9. State and explain the Law of Equi-Marginal Productivity. How does it help the manufacturer? How does he manage to approach the ideal?

CHAPTER IX

GROWTH OF ECONOMIC EFFORT AND TYPES OF BUSINESS MANAGEMENT

1. Hunting and Fishing Stage

At the early stages of civilization man had very few and simple wants not much different from the animals like whom he lived a precarious existence. The primitive man did not know how to produce things but lived on the bounties of Nature like roots, fruits, flesh and fish. He used crude tools like wooden sticks, sharp stones, animal bones or combined them to form spears. With the invention of fire he began to utilize metals like bronze and iron and thus progressed from the Stone Age to Bronze and Iron Ages. The employment of metallic weapons like bows and arrows, spears and javelins increased his efficiency in producing his food. His dress was made of the leaves and barks of trees and later on the animal skins. Caves or hollows of the trees provided him shelter at night. There was no corporate life and people lived in families which later on grew into tribes that constantly warred against each other for the possession of scanty natural resources.

As wealth produced was little, there was no saving and, therefore, no private property. Life was hard and population sparse. Production was difficult and aimed at the satisfaction of personal wants. There was no possibility of other economic activities like exchange and distribution.

2. Pastoral or Nomadic Stage

Hunting proved ineffective to supply the needs of growing population and men realized that it was more useful to domesticate animals than to kill them. The rearing of cattle and sheep and goats provided

them with more plentiful food in milk and meat, dress in skins and wool, and also means of transport. Thus cattle came to be looked upon as the principal form of wealth and the richness of a man was calculated by the heads of cattle he possessed. This stage is known as the Pastoral Stage. The chief difficulty here was the supply of fodder for the cattle and because people depended on grass only to feed their cattle they had to roam from place to place in search of new pastures. They had no fixed abode but temporary halts at grazing grounds, making a fresh move as soon as the local supply of grass was exhausted. Nomadic life was thus an important feature of the Pastoral Stage.

In this stage the conception of private property arose and it consisted of cattle and tools and weapons. Where members of an enemy tribe were captured and served as slaves to their conquerors, they were also looked upon as wealth. A big family or a tribe was self-sufficient in the satisfaction of wants and did not depend upon securing their requirements from others by exchange.

3. Agricultural Stage

The pastoral stage gradually advanced into Agricultural Stage when men began to tend plants side by side with tending cattle. Life became more settled and people lived in settled abodes where land was suitable and assured them a regular and plentiful supply of food for themselves and fodder for their cattle. Larger populations could be supported and families collected together to form villages which later on grew into towns and cities. Social intercourse between people grew up; they began to live in a cooperative spirit, and exchange and commerce developed. Efficiency of effort improved and people lived in comparatively great comforts with better food, dress and shelter.

The transition from agricultural to industrial and commercial stages cannot be definitely fixed. Sometimes exchange and commerce developed earlier than agcuriltural stage while sometimes they developed simultaneously and also followed agriculture. Yet it is to be remembered that agricultural stage has not been completely displaced even in the highly industrialized countries like England where over 80% of people depend upon industries for their subsistence. Of course, the primitive methods of farming are being constantly modified and improved in the light of scientific researches and mechanical improvements, but no community has found agriculture superfluous simply because industrialization yields greater wealth than agriculture. Both agriculture and industries are existing, not as rival, but as supplementary efforts though according to the aptitude of people and the natural resources of the region, their relative importance varies from country to country.

4. Stages on the Development of Industrial Effort

1. **Family Economy or the Home Industry System.**—Family economy means the stage of economic self-sufficiency with the family as a unit of economic life. The interests of the members of the family in this stage are so identical and limited to the family that they could have overlooked the existence of other families. People depended upon the members of the family for the satisfaction of their wants. Articles needed for the satisfaction of wants were produced by the family and the products were meant to be consumed by the family. All the factors of production were supplied from the family resources.

2. **Handicraft System.**—The handicraft system can be studied in four stages:—(i) Help or Hire System; (ii) Apprenticeship System; (iii) Guild System; and (iv) Domestic System.

(i) *Help or Hire System.*—The self-sufficiency system of family economy gradually broke down due to growing wants but limited supply of labour, and the family had to depend on the help of occasional hands outside it. These extra hands were employed not in the sense of modern labourers of the factory, working so many hours a day and having no interest in the welfare of the business except earning their wages. They were invited into the family, and were treated as is members with whom they worked and lived.

(ii) *Apprenticeship System.*—This system was very common in European countries in mediæval times. Usually a young man left his home to carve out a career in the world and attached himself as an apprentice to an artisan or a craftsman. During the period of apprenticeship he lived in the family and occasionally paid for his training by rendering additional domestic service. Usually their life was none too pleasant as they were treated as strangers but sometimes they were fortunate enough to be kindly received and considerably treated with the prospect of entering the master's business as partners.

In this stage the craftsmen sold their wares to the neighbours or produced them on the designs supplied by them. The requirements of the neighbours being few and simple and being fully understood by the craftsmen, there was little or no risk borne by them. For supplying the local needs production was on a small scale and all the factors of production were supplied by the family except a little labour that they got from apprentices or hired labour.

(iii) *Guild System.*—In course of time the craftsmen plying the same craft combined themselves into Guilds or associations jealously excluding others from entering that trade, thus reducing competition and increasing their prosperity. It was a kind of monopoly of trade and labour, fixing up the standard of

efficiency and regulating price for the benefit of the craftsmen members of the guild. Often these guilds acquired political power in the towns of Europe and were able to control the city states in the Middle Ages there. This system prospered as long as the markets were local and limited to the surrounding villages and neighbouring towns but broke down with expanding markets. In India we had similar guilds developing into castes with particular crafts from which the members of other caste guilds were rigidly excluded. The present castes of *jolahas*, blacksmiths, carpenters and others are the remnants of the old caste guild system, though these days their influence has considerably weakened.

(iv) *Domestic System*.—With the improvement in the means of transport and communication and the expansion of markets, the demand for the articles increased, but it was beyond the means of the poorer craftsmen to cope with this demand. Here was the chance for the richer craftsmen who increased their scale of production by inducing the poorer craftsmen to work for them. The poorer craftsmen were supplied with the raw materials and tools also if necessary, worked in their homes, handling over the finished commodity to their employers who sold them in the market and thus became middlemen or intermediaries. There is another variety of domestic system in which the artisans produce the articles in their homes independently, i.e., supplying all the requirements from their own resources, but selling the products to the *mahajans* or *kothiwalas* rather than trading their wares direct to the consumers.

Thus there grew up *mahajans* or merchant-middlemen, a capitalist class, who later on became the employers in the modern factory system, and the artisans were reduced to the class of labourers or mere wage-earners. These artisans worked under the direction and control of the *mahajans* who thus

became the organizer-entrepreneurs as the entire profits or losses of the trade were borne by them.

3. **Factory System.**—Under the domestic system the artisans and craftsmen worked at their leisure in their homes and, therefore, the supply of goods was neither rapid nor regular; moreover the articles could not be uniform in quality and design as the training, efficiency and home conditions of work varied from artisan to artisan. To remove these drawbacks, the employers collected together a number of workmen in their own homes or separate sheds and buildings and got the work done under their personal supervision thus laying the foundations of the factory system. Gradually the factories began to employ vast number of labourers whose programme of work was chalked out in minutest details for them by scientific management that also supplied the necessary instruments and machinery usually run by motive power. The development of factory system was made possible by the inventions and discoveries that followed the adoption of steam-engine. Means of transport like railways, steamships, motor-cars and aeroplanes reduced distances, discovered new lands as sources of raw materials and markets for finished commodities, converted the entire world into one organized market. It necessitated the enlargement of the scale of production based upon the efficient division of labour and scientific management, and ultimately placed within the reach of the consumers those articles that were formerly the luxuries of the well-to-do people.

5. Types of Business Organization

1. **Individual Ownership.**—The simplest and oldest form of industrial management is the single entrepreneur system represented by the artisan or the petty shopkeeper. He supplies his own land, does most of labour himself and furnishes his own capital. Of course, there is nobody else to share the profits or

losses of the business with him. This system is essentially suited to small-scale businesses and is most popular where the market is a limited one.

Even the employment of hired labour and borrowed capital does not alter the nature of individual ownership. It may be run on large scale like a big farm or store or even a factory—and external help by way of the supply of factors may be necessary, but the business remains a one-man business.

Its great advantage lies in the organizer's eye being everywhere. Personal touch is the main characteristic and ensures personal interest with greater economy and more efficiency. But the resources and organizing skill of a single entrepreneur being limited, the business provides little scope for bold enterprise.

2. **Partnership.**—Very often it is seen that capital and organizing skill are not found in one man. There may be persons with plenty of idle capital yet no requisite skill to use it productively; again, an efficient organizer may be seeking capital to start a business. To bring them together is the function of partnership.

In partnership there is a certain degree of specialization in the contribution of factors of production. Partnership is on a larger scale than the individual enterprise and permits division of labour among the workers and specialization in the contribution of capital and organizing skill made by different partners.

Mutual confidence among partners is the essential condition of its success. Many a partnership has failed due to suspicion and insincerity among the partners. The liability in partnership being unlimited there is great risk to which one or more partners may be exposed by inefficiency or unscrupulous conduct of any other partner. Any of the partners can be made to pay their creditors all the dues upon the

business as a whole howsoever small interest he may be holding in it. A partner though owing only ¼ of the business can be called upon to pay the creditors of the firm the entire loss if the other partners do not possess sufficient means to shoulder their portion of the loss.

3. **Joint.Stock Company.**—With increasing scale of production necessitating the employment of armies of wage-earners, enormous capital and highly specialized organizing skill, partnership business yielded place to the joint-stock companies. A joint-stock company is an association of members with a common stock or capital that is divided into shares held by these members. Its capital, undoubtedly the most important of factors, is accumulated by the issue of shares to start the business and later on by issuing debentures in case the preliminary share money is found insufficient for its requirements.

The company is to be registered with the Government as an association started with the object of carrying on a certain type of business. Articles of Memorandum embodying all the relevant information about the nature of proposed business with the requirements of capital and the scope of work, etc., are to be submitted to the Government. After the registration it issues its prospectus containing necessary details with a view to invite the public to purchase its shares. The company's *authorized capital* is the maximum value up to which it can raise its share-money among the public. Usually only a portion of the authorized capital is actually issued or thrown open to the public for sale. This is called the *Issue Capital.* The public may feel interested in the business of the company and may buy all the shares offered for sale or only a portion of them. The amount of capital or the value of shares so taken up by the public is known as the *Subscribed Capital.* Out of the subscribed capital only a portion may be called

up from the shareholders, and this capital will be called the *Paid-Up Capital*.

A company may have the authorized capital of Rs. 10 lakhs but, to start with, only Rs. 6 lakhs worth of shares are offered for sale. Rs. 6 lakhs is thus the issued capital. If suppose this issued capital is divided into 6000 shares of Rs. 100 each and only 4,000 of them find purchasers, then Is. 4 lakhs will be the subscribed capital. If the shareholders are called upon to pay only to the extent of Rs. 75 per share then Rs. 300,000 will be called the paid-up capital.

If at any time in the future the company wants to borrow monev it may do so on the security of its assets. Such loans are contracted by issuing *Debentures* which carry a fixed rate of interest. The debenture-holders become the creditors of the company and should be distinguished from the share-holders who are its proprietors.

The management of the company is entrusted to a Board of Directors who are elected from amongst the share-holders. The Board may further delegate its power to a Managing Director who assisted by a group of assistants, foremen, inspectors and bosses manages the business of the company.

The enterprise or risk is borne by the proprietors or the shareholders in strict relation to the kind and value of the shares bought by them. The share-holders bear *limited liability*, as distinct from the un-limited liability in a partnership. In the event of heavy loss up to any extent, the shareholders will be required to pay up the uncalled portion or the balance of the share-money not paid so far, that is, Rs. 25 per share in the instance quoted above. Their liability is limited to the extent of the value of shares they have purchased and no more.

The profit-sharing rights of the shareholders vary according to the type of shares held by them. The *Preference Share*-holders receive their fixed rate of

profit before other types of shareholders get anything. Among the preference shares also there may be priority of payment, the *First Preterence* shares receiving payment before the *Second Preference* shares. Sometimes there may be *Cumulative Preference* shares the claim for profits on which is not lost if in a particular year no profits are made, but accumulates till all the arrears have been discharged. Such shares carry the least amount of risk even among preference shares to which little risk is attached. Next come the *Ordinary* shares on which the dividend is decided by the general meeting of shareholders only after provision for the payment on the preference shares has been made. And last come the *Deferred* shares on which dividend may be paid if there is a surplus left. They thus carry the greatest risk in the business.

Though capital holds a dominant position among the factors of production in a joint-stock company, the importance of labour is also great. It is employed in big numbers and affords best facilities for the introduction of the best type of division of labour.

Thus in a joint-stock company, land is supplied by the landlords on whose land the factory stands, capital by shareholders and debenture-holders, labour by hired wage-earners, organization by the Board of Directors and Managers, and enterprise by the shareholders.

The joint-stock managemnt has been astoundingly successful. Its advantages are the limitless facilities for division of labour, limited liability system that attracts huge capital from small investors, and its democratic form of organization that ensures efficiency and flexibility in its management. The production is naturally efficient as it can afford to employ experts as managers and supervisors and highly trained and skilful hands as labourers, while the concentration of vast capital has enabled it to employ the latest and the best machinery.

Yet this system of production has given rise to bitter conflict between the employers, so-called capitalists, and the employees, *i.e.*, labour. The motive of the companies is profiteering whether at the expense of the consumers who may be charged prices much higher than the cost of production, or the labourers who are paid wages below their contribution to production. The shareholders who seldom meet and rarely have the capacity or opportunity to look into the management, may be easily duped by unscrupulous directors and managers. Mismanagement, corruption and jobbery on large scale can be perpetrated at the cost of the public. Among the various remedies suggested are co-partnership and co-operative form of management.

4. **Co-partnership.**—It is claimed that co-partnership business retains all the advantages of joint-stock production and yet frees it from the drawback of labour-capital trouble. The labourers are allowed to buy shares of the company and thus acquire a sense of pride in the ownership of the company. Their sense of inferiority is removed by giving them representation among the board of directors and this step also removes their suspicions of being exploited by capitalists. Thus is introduced an atmosphere of mutual confidence between the two parties and harmony in the conduct of the business. *Profit-sharing* may also be adopted according to which a certain percentage of profits of the firm are distributed among the labourers as *bonus*.

5. **Cooperative Production.**—Here all the factors of production are supplied by a group of people who become their own employers. The distinction of being an employer and an employee is totally removed and no ground for suspicion and strained feelings can exist. A detailed account of the co-operative activity has been given in Chapter IX under Exchange.

6. **Government Enterprise.**—Modern tendency is for the government bodies to take up under 'Public Ownership' the enterprises formerly run by private management. A government enterprise eliminates profiteering as the spirit underlying it is to supply the goods and services to the consumers at the lowest possible cost; the management is liable to change in case of inefficiency as the tax-payers are the ultimate owners and risk-takers and can exercise their voting power to that effect. The works of public utility like the supply of electricity and water, road and rail transport, means of communications like posts and telegraphs and enterprises of national interest like mint and the manufacture of munitions are usually undertaken by government bodies. Their profits go to the government treasury and to that extent lighten the burden of taxes on the tax-payers, though the government management is not necessarily the most efficient.

EXERCISES

1. Show that the growth of economic life has been a long drawn-out struggle between Man and Nature.

2. What were guilds? Can you liken them to Indian castes as obtaining to-day. Give reasons for your answer.

3. Describe the working of any industry of your town or district that is run on the Domestic System. What improvements can you suggest in its organization?

4. What are the two important features of Factory System? Estimate the benefits derived from this system and the possibilities of future consequences. Do you recommend it to be widely adopted in India?

5. In what stage of economic development would you place India of to-day and why?

6. Why do "partnerships" come to grief so frequently? What is there in partnership business to render it less stable though more efficient than the single-ownership business?

7. "Joint-Stock Companies represent a unit of production best suited to survive in these days of intense competition." Do you agree with the statement?

8. 'Labour is blind, while capital is lame. Disunited they perish. In unity lies their strength.' Justify this from the working of a joint-stock company.

9. Enumerate the factors responsible for the success of joint-stock companies and suggest alternative forms of management to remove its defects.

10. Describe the specialization of factors of production as rendered possible by joint-stock companies.

11. Do you prefer that big businesses be taken over and managed by the state rather than by private organizations? Why?

CHAPTER X

ECONOMIC TRANSITION IN INDIA

§ 1. **Old and New Economic Order.**—Morrison divides the countries of the world into two broad economic categories: (i) those belonging to the Old Economic Order that have not yet passed through their industrial revolution, like India, Egypt and some countries of Eastern Europe; and (ii) those belonging to the New Economic Order that have accomplished their industrial revolution, like England, Germany and U.S.A.

§ 2. **Characteristics of the Old Economic Order.**—

(i) The isolation and self-sufficiency of the communities mainly because of defective village and inadequate transport and communication facilities.

(ii) The predominance of custom and status over competition.

(iii) The preponderance of agriculture over other industries.

(iv) Small-scale and cottage industries carried on by workers with their own resources of inadequate capital and catering to the needs of the local consumers.

(v) Narrow market and simple and imperfect Division of Labour.

(vi) Prevalence of barter or exchange of commodities and little use of money as a medium of exchange.

(vii) Inadequate credit facilities and hence the prevalence of usury or exorbitant rates of interest.

§ 3. **Characteristics of the New Economic Order.**—

(i) Interdependence of the different parts of the industrial world brought about by improved means of transport and communication.

(ii) Prevalence of competition.

(iii) Increasing importance of manufacturing industries over agriculture.

(iv) Large-scale industries run with big capital and large number of labourers.

(v) World-wide markets and scientific Division of Labour.

(vi) Prevalence of money economy.

(vii) Expansion of banking and credit institutions and absence of usury.

§ 4. **India in the Transpositional Stage.**—According to the above classification India belongs to the old-order countries because she has yet to pass through her industrial revolution but, really speaking, India does not stand where it did during the last century. She has well advanced on the road to economic transformation though there is much to be achieved before she can claim the membership of the new economic order. The progress has been slow yet steady and it can be doubted if she will ever experience the disturbing changes that are associated with *Industrial Revolution*. On account of her peculiar social structure and outlook on life the old order will die hard, and it will be better if she benefits from the mistakes and miseries of the English Industrial Revolution and brings about a gradual progress from the old to the new order. On the basis of the past experience it can be surmised that India will not pass through revolution but is already undergoing her

industrial revolution. That is why we talk of economic transition in the country.

§ 5. **The Village in Transition.**—*Agriculture and Handicrafts*.—The principal transitional features of the village life are being given below:—

1. The old self-sufficiency of the village is vanishing and it has become a unit of the national and even international economic structure. In olden days the village was a self-sufficing unit. It had its complement of village servants and artisans who supplied the village community with all its requirements except salt and a few luxuries that were purchased at the village fairs brought there by caravans. Now the village buys even such necessaries of life as cloth, kerosene oil, matches, needles, glass bangles, toys, scissors, lanterns, sugar, spices, tea and numerous other articles received there from the distant parts of the country or even foreign countries. On the other hand, the village no longer produces goods for its own consumption alone, but grows various products for sale in distant markets both in India and abroad.

2. The agriculture is also in transition. Not that the organisation of the industry has undergone a fundamental change and the scale of farming enlarged, but the cultivators have now replaced food-crops like cereals and pulses by commercial crops like cotton, jute, and oil-seeds and sugarcane because more extensive irrigation facilities are now available. With the help of improved means

of transport and communications these cash crops are sold to distant markets and bring in increased money returns to the farmers.

3. There is transition in the handicrafts too. The once flourishing cottage industries have more or less succumbed to the severe competition from machine-made goods and the manual worker has suffered much, rendered unemployment and taken refuge on land that is increasing the pressure of population upon the soil. Recently attempts are being made to resuscitate village crafts once again.

4. The nature of the famines has changed. People no longer die because of absence of food articles which are now easily and quickly transported by roads and railways from the more fortunate regions tc the famine-stricken areas. Famine has changed only to a state of scarcity and with the organisation of relief by the state and private charity the sufferings from famines have become milder.

5. Barter is being replaced by money economy. The customary payment of wages in terms of grain no longer predominates while the revenue and rents, taxes and interests are usually paid in cash. The farmer sells his commercial crops for cash and makes purchases in the markets with the help of money thus realized.

6. Competition is gradually taking the place of custom. Prices, wages and rents are no longer fixed by custom but are influenced by the competitive conditions

prevailing in the rapid growth of population the demand for land has increased enormously and there is severe competition for land as it is the main source of subsistence in the village. Naturally the rents have increased.

7. The villagers have become more mobile as they are driven out of their homes by lack of occupation and seek employment in the towns and cities. Cheap and improved means of transport also facilitate this movement. The growth of individualistic spirit as a result of western influences and the break-up of the joint-family system encourage people to leave their homes and carve out independent careers for themselves.

§ 6. **Transition in Industries.**—In the ancient past India was both a great agricultural and a great industrial country, though her industrial crafts were centered in towns more than in the village. The town industries were run on a larger scale, were better organised and displayed greater workmanship than the village industries. They were famous throughout the old world and exported high-grade silk, woollen and cotton fabrics to clothe the aristocracy of Greece and Rome. The Indian workman had attained high-grade skill in the working of metals and precious stones, gold and silver thread, jewellery, carving and enamelling, tanning and paper making and all kinds of technical art when Europe was inhabited by half-civilized tribes.

This industrial eminence was retained by India up to the times of the Mughal Emperors when the modern European nations felt attracted by the arts and wealth of the country and established commercial relations with her. Thereafter began a steady

fall of her industrial supremacy which almost disappeared with the establishment of the rule of the East India Company.

But a revival set in during the last quarter of the last century both in the rehabiliation of the cottage crafts and the establishment of large-scale industries on the models of the West. The pioneering work was done by the British capital and enterprise in the plantations of tea, coffee and indigo, and later on the two great textiles, cotton and jute, developed, the former once again attaining its positions as the national industry of the country. They were followed by the mining, iron and steel manufacture, glass and paper making, tanning and leather-goods manufacture, oil-presses and saw mills, and a host of intermediate and minor types of industries that will be discussed later on.

The industrial evolution was slow to begin with but picked up speed with the construction of roads and railways tapping resources even in the remote corners of the country, transporting goods to foreign countries and distributing the imported articles throughout the length and breadth of India. The Government adopted the policy of discriminate protection towards the deserving Indian industries and the swadeshi movement did much to stimulate the industrial development.

The large-scale industries were established in the towns which began to grow rapidly. Bombay, Calcutta, Jamshedpur, Cawnpore, Jubbulpore and a host of others in the Punjab sprang up as centres of modern factory production. Their progress and prosperity was partly at the cost of the rural areas and partly the smaller towns of the neighbourhood. Like the towns of England, these Indian towns could not escape the evils of industrialisation like overcrowding, insanitary living and the social evils of drink and disease. They were also not spared the

struggle between the capitalist and labourer attended with strikes and lockouts, unemployment and beggary.

Yet with all this the industrial progress of the country has been far from satisfactory. Agriculture continues the mainstay of 80% of population while industries of all kinds give employment to only 15 million people out of a population of 390 millions. The big industries cannot seem to progress without protection against foreign goods while cottage industries are leading a precarious existence. India is still a country of 7 lakh villages, the towns containing only 13% of her total population; and the old economic order survives vigorously in the rural areas. The world factors like the present war are favourable to industrialisation and it is expected that they will be fully utilized.

EXERCISES

1. What is meant by saying that India is at a stage of economic transition?

2. Give the main characteristics of the new economic order and show how it differs from the old order.

3. How has the Indian village been affected by the economic transition? Is the change to the advantage of the villagers?

4. Trace the influence of economic transition on the development of industries in India.

5. "The unchanging rural India is changing slowly yet surely." Comment upon this.

CHAPTER XI

LARGE-SCALE INDUSTRIES

The organised industries of India can be classified into 4 important groups: (i) Textiles—Cotton, Jute, Woollen and Silk; (ii) Heavy industries—Iron and steel, and Engineering; (iii) Miscellaneous—Sugar, Matches, Cement, Paper, Glass, Leather, and Films and (iv) Minor industries and Plantations.

1. Textiles

§ 1. **Cotton.**—Cotton industry is India's national industry and in all its branches it supports the highest number of workers employed of all the industries in the country. An area of over 23·5 million acres produced in 1941-42 an output of 5,980,000 bales of cotton of 400 lbs., more than sufficient for the country's requirements. Out of it as many as 2,703,000 bales were exported to foreign countries of which Japan was the biggest purchaser with an intake of 14,37,500 bales and United Kingdom followed with only 440,000 bales. Yet Indian cotton is short-staple cotton suitable for rough and inferior variety of goods, and for the manufacture of superior goods of over 22 counts Egyptian and American cotton has to be imported, such imports in 1935-36 amountinig to Rs. 2.6 crores. The attempts of the Indian Central Cotton Committee have succeeded in producing medium-staple varieties of $\frac{7}{8}$" to 1 $\frac{1}{16}$" in length and these are being sown over an ever-increasing area.

The first successful cotton mill was started in Bombay in 1856 with Indian enterprise and since then the Bombay Island has developed into the home of cotton textiles because of the advantages of climate, the credit facilities for financing the industry and its

situation near the cotton-growing regions of India. With temporary setbacks the industry has progressed rapidly as a result of stimulus received during the American Civil War and from the Swadeshi movement, while the biggest stride was taken during the Great War. In August 1943 the number of cotton mills working in the country was 401 with an ivestment of over Rs. 45 crores mainly owned by Indians, operating over 2 lakh looms and 10 crore spindles and employing 5,02,000 mill-hands on an average per day. During 1942-43 they spun 1533 million pounds of yarn and manufactured cotton cloth to the extent of 900 million lbs. in weight or 4,109 million yards in length in addition to enormous hosiery goods. But this quantity was insufficient to meet Indian demand and cotton goods worth Rs. 16·8 crores were imported. India was also able to export cotton piece-goods, twist and yarn to the neighbouring countries of Syria, Iran, Iraq, Aden and East-African territories, their value in 1942-43 being Rs. 46·10 crores, as compared to Rs. 7·12 crores in 1938-39. It is not difficult to understand that it was due to war which prevented England and Japan export to India's customers and left the entire field to Indian producers, though if allowance is made for higher prices, the quantity of goods exported comes to a much lower figure.

This industry has flourished behind protective and high revenue duties imposed on foreign goods by Indian Government and with the support of swadeshi spirit shown by the people. Yet it has not developed enough to capture entire Indian market for itself. The Indian cotton mills produce only 40% (handloom 35%) of our own requirements and for the remaining 25% we still depend upon imports. Management is not quite efficient and cost is high in spite of wages of labourers being low, and the industry will find itself in hot water if it is deprived of the advantage of

high import duties and advantageous terms of trade agreements* made with both Japan and the United Kingdom. Perhaps the Government has been too indulgent and the public too patronizing in conceding to the demand of millowners for protection against foreign goods. The result is that no necessity has been felt by them for setting their own home in order by economy and rationalization, and the inefficiency of management in the industry continues.

§ 2. **Jute.**—If Bombay is the home of cotton textiles, Calcutta is the centre of jute manufacture. Though the first jute mill was started in 1855 at Risra, the industry has become established at Calcutta due to facilities of transport by sea and overland. Bengal, Bihar and Orissa constitute an ideal region for jute cultivation and enjoy a virtual monopoly in jute, they producing almost 98% of total jute output. The area under the crop in 1939 was 33 lakh acres and yield 69 lakh bales. The industry proved remunerative from the very beginning and jute cultivation and manufacture developed pretty steadily under European management, but an unprecedented prosperity was enjoyed during the Great War due to an intensive demand for gunny bags and cloth. Yet after the termination of the hostilities, the demand fell till the lowest ebb was reached in 1931-32 during the acutest period of economic depression. By 1938-39, when some recovery was made due to increased demand for jute goods during the Abyssinian, Spanish civil and the present war, there were 105 mills with an authorized capital of Rs. 33 crores, operating 68,000 looms, and 13,50,000 spindles and employing a daily average of over $2\frac{1}{2}$ lakh persons. During the year the exports amounted to 6,93,000 tons of raw jute, 598 million of jute bags and 1550 million yards of cloth worth about Rs. 40 crores constituting 24·3%

---

* See Chapter V of Exchange.

of all merchandise exported from India. The value of exports increased to Rs. 64 crores in 1941-42 but fell to Rs. 45 crores in the next year owing to shortage of shipping and war-needs in the East which became more pressing.

The present problem confronting the industry is how to reduce the cultivation and restrict the manufacture of jute in view of the supply having far exceeded the demand in the world. Foreign customers like Germany, Italy and France had imposed high duties on jute manufacture exported from India while attempts are constantly made to discover a substitute for jute. Though success in the direction has not been achieved, the use of paper bags for storage and transport of commodities has reduced the demand for jute. Since the commencement of hostilities in the present war the European market has been lost to Indian jute goods though an increased demand from the Empire countries has partially made up the deficiency from that quarter. Compulsory restriction of jute acreage in Bengal came into force in 1941 and only 21·6 lakh acres were put under this crop against 56·7 lakh acres in the previous year. The area rose once again to 33·3 lakh acres by 1943. The World War II adversely affected the jute trade in 1942 and 43 but the Eastern Front provided scope for increased jute consumption to some extent.

§ 3. **The Woollen Industry.**—The woollen industry of India is of a more recent growth than cotton or jute and is, therefore, less developed. The number of mills in British India and Indian States was 39 in the year 1937,* with a paid-up capital of Rs. 100 lakhs, having 1,958 looms and 68,107 spindles and employing approximately 6,500 men per day. Though India has a big population of sheep numbering 43 million, they are more like goats than sheep and their

* No Reecnt figures are available.

fleece more like hair than wool. As a consequence the Indian industry has to depend on imported wool though the bulk of the wool used in the mills is Indian wool. Merino and cross-breed is imported from Australia for the manufacture of the finer classes of goods while imports from Afghanistan, Iran, Central Asia, Tibet and Nepal are also considerable. The market for the manufactures is almost entirely in India though the present war has created temporarily a market overseas, while the imports of woollen and worsted piece-goods are received from Japan, United Kingdom and Germany. In 1940-41 these imports of piece-goods were valued at Rs. 429 lakhs including of raw wool worth Rs. 279 lakhs.

§ 4. **Silk.**—Silk industry in India is more of a cottage-industry type than a large industry like cotton or woollen, though there are about $1\frac{1}{2}$ dozen silk mills in the country. The chief centres noted for silk-goods manufacture are Benares, Surat, Amritsar, Bhagalpur and Murshidabad. The industry is not in a prosperous condition due to the competition from imported silk and artificial goods that were valued at Rs. 172 lakhs and Rs. 509 lakhs respectively in 1940-41, and also great difficulty experienced in the culture of silkworms in the country. Of the three well-known purely indigenous silkworms *tasar*, *muga* and *eri*, the muga silk is the most interesting and attractive and the cocoon can be easily reeled. Certain new varieties from France were tried in Bengal with disappointment but with a fair amount of success in Dehradun and Kashmir. This circumstance together with defective system of rearing and of hand-reeling and weaving is largely responsible for present depression in the mulberry silk trade. India has, therefore, to import raw silk from Japan, China and Italy.

2. Heavy Industries

Of great national importance are these industries called the basic or 'key' industries as they supply the instruments and machinery used by other industries. In India the establishment of basic industries has been belated and their expansion slow which fact explains largely why the industrial development of the country has been retarded.

§ 5. **Iron and Steel.**—An unsuccessful start was made by the Bengal Iron and Steel Company, an English concern, at Barakar as early as in 1874, yet it was left to the genius of Sir J. N. Tata to float and establish at Sakchi in 1907 the Tata Iron and Steel Company which has since developed under Indian management and enterprise into the biggest works of their kind in British Empire. Its successful example was followed by the Indian Iron and Steel company working at Burnpur near Asansol, the Mysore Iron Works at Bhadravati, and a few small foundaries in Madras and Bengal. It is noteworthy that the rapid

growth of this industry was made possible with the Government assistance in the form of high protective duties imposed on foreign goods and heavy bounties paid to Indian firms for the production of certain articles like rails and wagons.

The iron and steel companies represent an investment of Rs. 25 crores, and employ roughly $1\frac{1}{2}$ lakh men and women daily, but their products are insufficient to satisfy country's requirements which have to be met from foreign imports. In 1940-41 the import of iron and steel was valued at Rs. 629 lakhs and machinery and milkwork at Rs. 1189 lakhs. India also exports pig-iron, the quantity in 1938-39 being 5,14,000 tons worth Rs. 256 lakhs. Japan was the principal consumer of Indian pig-iron and the proportion taken by her was 64%. The exports to England and China, the United States and Hongkong are on a small scale, and are further decreasing in the case of the first two countries.

There is enormous scope for the expansion of iron and steel industry not only along the well-established lines of manufacturing steel goods but also for the manufacture of armaments, cars, tractors, aeroplanes and locomotive engines. Advantage has been taken of the opportunities presented by the World War II and India has practically reached self-sufficiency in the more widely used forms of steel. The last war proved the usefulness of this industry; the present war confirmed its indispensability.

§ 6. **Engineering Industry.**—Engineering industry prepares machinery and mill work from the smelted iron supplied to it by iron and steel companies. In India there are no engineering industries to manufacture machines and tools and instruments and, therefore, her industrial development depends entirely upon foreign machinery. This is much costlier than the products would be if made in the country, and as a consequence the cost of production of various

Indian industries is increased and their power to compete with foreign goods diminished. It is a pity that whenever a new enterprise is to be started or an old industry expanded, crores of rupees have in the first instance to be spent in foreign lands for the purchase of necessary machinery before any profits are realized in the country. The extent of this helplessness can be gauged from heavy annual imports of machinery and millwork that in 1938-39 were valued at Rs. 19·7 crores.

3. Miscellaneous Industries

§ 7. **Sugar.**—In recent years India's sugar industry has shown phenomenal progress. In 1929-30 the area under cane cultivation was 26,77,000 acres, the total quantity of sugar produced was 3,11,000 tons, while import of foreign sugar was approximately 9,00,000 tons valued at about Rs. 25 crores. The year 1943-44 presented a totally different picture. With the cane-cultivated area at 36,00,000 acres, the number of factories grew from 27 to 150, the imports reduced to only 583 tons only, while the output of sugar was estimated at 13,70,000 tons, i.e., about 2,94,000 tons in excess of home consumption, and of *gur* at 36,00,000 tons.

This remarkable development in spite of economic depression has been achieved mainly due to high protection afforded in 1932 to indigenous industry by way of imposing a heavy duty of Rs. 9/1/- per cwt. on foreign sugar, though since 1934 it has been slightly counterbalanced by an excise duty of Rs. 1/5/- per cwt. on factory sugar (raised to Rs. 3 recently) and Re. -/10/- per cwt. on Khandsari sugar. Other factors that helped the industry were low price of land for factory building and of sugarcane that became available in huge quantities due to extensive cultivation. The prices of sugar machinery too had gone down and it was also a contributory cause.

Along with the growth in manufacture, improved varieties of cane also began to be introduced with the result that now almost half of the total sugarcane area is grown with these. The U.P. and Bihar are the home provinces for sugar production responsible for more than 50% and 25% respectively of the total output, and 80% of their area is under improved variety of cane.

It may be noted that now India is the largest producer of sugar among all the countries of the world. The Indian sugar industry is the second largest industry, next in importan e to only cotton textiles, representing an investment of 30 to 33 crores and employing on an average over 2,00,000 labourers. There is plenty of margin for further expansion provided the manufacturers improve their internal management, and by reducing the price of sugar stimulate the demand of home consumers. Foreign markets can be explored later on as at least for 5 years India is debarred from exporting sugar under the International Sugar Agreement reached in London in 1937.

The main problems affecting the industry are the sugar excise duty, licensing of sugar production, the guaranteeing of reasonable prices to the farmer for his cane and the disposal of the surplus production. Due to high protective duties the Government of India have suffered heavy loss of revenue under this head and the revenue receipts estimated in 1936-37 were only Rs. 65 lakhs against Rs. 10 crores in 1930-31. The imposition of the excise duties are expected to compensate them by about Rs. $2\frac{1}{4}$ crores, a much needed help to the Government. On the other hand, they have reduced the profits of all and severely hit the comparatively inefficient and undersized factories. But the factory-owners should not grudge a little contribution to the Government or a little relief to the taxpayer when they have already cleared rich profits

under the protection of the Government. Besides, from the proceeds of the excise duty an amount equivalent to one anna per cent is distributed among the provinces for the purpose of assisting in organising and working the cooperative societies of cane growers so as to enable them to secure fair prices for their cane. Recently, with a view to regulate and control sugar production and marketing, legislation has been passed in the U.P. and Bihar making it compulsory for every factory-owner to obtain a licence from the provincial government for working the factory, and pay six pies per maund as licensing

The other problem is that of guaranteeing to the cane grower a fair price for the cane and to protect him from ingenious devices adopted by factory-owners or their agents to harass and underpay them. The Government consequently announces the minimum price that the farmer must be paid from fortnight to fortnight and has appointed special inspectors to supervise the purchase of cane and observance of the Government rules. But for this assistance from the state, the interests of the cane growers could never have been safeguarded.

The problem of the disposal of the surplus sugar is the most difficult to solve. Due to the high price fixed for cane (up to Re. -/9/6 per maund in 1939-40 season) and an enhanced excise at Rs. 3 the cost of sugar manufacture has risen and so the price. In these circumstances the consumer's demand cannot rise. Moreover the offer made by the Indian Sugar Syndicate to sell to Britain sugar at the cost price (less the excise) has not materialized as due to stress of war the shipping accommodation cannot be provided for the export of sugar. There does not seem to be any help against accumulating stocks with the manufacturers except reduced production which has been aimed at by restricting the working days of the factories to only 90 during the 1940-41 season.

§ 8. **Matches.**—Like sugar, in the production of matches also India has become self-sufficient; but unlike sugar, the industry is mainly owned and controlled by foreign capital and management. In 1922 the Government imposed a high revenue duty of Rs. 1/8/- per gross of match-boxes while in 1931-32 it was converted into a protective duty at Rs. 2/4/-. The progress of the industry was phenomenal and imports steadily diminished to just over 23 lakhs of rupees in 1938-39. This improvement was maintained in spite of an excise duty imposed on matches in 1934-35 at the rates of Re. 1/-, Rs. 1/8 and Rs. 2/- per gross of boxes containing respectively up to 40, 60 and over 60 match-sticks. The import duties were correspondingly altered by adding 10 annas, 15 annas and Rs. 1/4/- respectively to the rates of excise duties.

Before 1922 the Indian market was controlled by the Swedish Match Trust which took advantage of the high revenue and protective duties and established its own factories in important places throughout the country. Later on it acquired some of the smaller Indian concerns with the result that at present more than 50 per cent of matches used in the country are the products of that Trust. Thus the benefits of Indian protective policy are largely enjoyed by foreigners, the scope for Indian enterprise is greatly restricted, while the wages of high-paid foreign labourers, experts and management are entirely lost to the country.

A weakness of the industry is its dependence on foreign timber as an adequate supply of suitable timber is not available in the country. Foreign the Indian Forest Research Institute produces the requisite quality of timber in the country, the industry will ever remain handicapped in this direction.

§ 9. **Cement.**—It is another industry which is contributing to the self-sufficiency stage of India.

Making a modest beginning in 1904, it achieved great success during the War when foreign cement could not be imported. By now there are 39 cement factories with a capital investment of Rs. 5 crores. After the War the industry suffered acutely due to low prices and appealed for protection which was refused on the ground that plight of the industry was due to over-production and cut-throat competition among the producers of the country and not due to serious competition from imported cement.

Through the efforts of the Cement Marketing Company of India, Limited and the Associated Cement Companies of India new varieties of cement began to be produced and sale and distribution of cement was regulated and was greatly improved. Almost unlimted raw material is available and there is also a vast market for the commodity and consequently wide margin for its expansion in the country. While consumption of cement has gone up, imports have gone down (to Rs. 10 lakhs in 1938-39) and Indian manufacture has benefited as is obvious from the following figures :

Year	Indian manufacture. (Tons.)	Imports. (Tons.)	Total Consumption. (Tons.)
1914	945	150,530	151,475
1918	84,344	20,016	104,360
1930	563,929	68,000	631,929
1935-36	886,267	42,900	929,167

§ 10. **Paper.**—The paper industry has not succeeded in creating for itself a strong position in spite of the protective duty of one anna a pound granted for the period 1-4-1925 to 31-3-32 and further extended for another 7 years. At present, 20 big and small paper mills produce paper mostly of medium quality worth about Rs. $1\frac{3}{4}$ crores while superior-quality

paper, cardboard, pasteboard and newsprint worth approximately Rs. 3·2 crores (1938-39) have to be imported.

The slow progress of the industry has been mainly due to lack of suitable paper-making material in adequate quantity. The supply of *sabai* grass, a tolerably good raw material, is seasonal and uncertain and imperfect transport facilities render it undependable, while a satisfactory process of preparing bambo-pulp has not yet been discovered. As soon as this process is perfected, almost unlimited raw material will be placed at the disposal of the industry though for the manufacture of better-quality paper imports of wood pulp will have to continue. Another handicap is the absence of chemical industry in India to supply chemicals needed in various processes of paper making, but there is no prospect in the near future of this deficiency being removed.

The industry has made much headway in recent years and the outbreak of war found it ready to take up the vastly increased demand for Indian paper brought about by the difficulty of importing paper. Fine paper imports have totally stopped and Indian paper mills are working to full capacity, yet are unable to meet consumption. Paper is also a controlled commodity, though recently 30% of mill consumption has been released for the use of the public. Government is also giving the mills every possible assistance in the transport of raw-material and in obtaining chemicals as sulphur, alum, caustic soda, etc.

§ 11. **Glass.**—Though the manufacture of superior-quality glass was practised in India from ancient times, its manufacture on modern European lines dates from the nineties of the last century. In the present stage the industry takes two well-defined forms. The indigenous cottage industry having its chief centres at Firozabad in U.P. and Belgaum in Bombay is mainly concerned with the manufacture of

cheap bangles. It is in a flourishing state and supplies most of home demand for bangles though before the war it was faced with strong competition from Japanese "silky" bangles. The modern factory industry is still in its infancy and, except three factories including the U.P. Glass Works at Bahjoi in U.P. where sheet glass is prepared, it mostly produces glass cake for bangles and simple kind of lampware and bottles. In all there are two dozen of these factories in the country most of them having sprung up during the war on account of cessation of foreign competition which was almost overwhelming in 1938-39 when glass and glassware worth Rs. 125 lakh were imported. Next to the U.P., Bengal and Bombay have shown commendable enterprize in this line and at factory in the latter province is venturing into the field of glass instrument-making. But it remains to be seen as to how many factories survive when foreign competition reasserts itself in the Indian market.

The comparative failure of this industry is due to a variety of causes. To begin with, mention may be made of lack of enlightened management and specialization, insufficiency of fluid capital and indifferent selection of the factory-sites away from the sources of raw materials and coal. The second cause is the paucity of soda ash which has, therefore, to be imported. This difficulty can be removed only by the establishment of chemical industries in the country. The final cause is the lack of Government support. The industry applied for protection and the Government referred its case to the Indian Tariff Board. It submitted its report in March 1932 recommending the grant of protection for 10 years and proposed the imposition of protective duties from 25% to 50% on various classes of glasswares. These findings were not acceptable to the Government and its final decision was postponed. However, a certain

measure of relief by way of a rebate of duty on imported soda ash has now been granted to the glass-manufacturing industry.

§ 12. **Leather.**—India possesses a large supply of hides and skins which are used for making shoes, suit-cases, fancy leather articles, book-binding, for covering the cotton mill rollers, transmission-belting and others. On account of these extensive uses in different industries, leather tanning is considered as a basic industry. The tanning of leather on large scale throughout the country has been possible as a cottage industry because India possesses a large selection of excellent tanning materials such as Acacia pods and bark, sumach, mangroves and myrabolams. The products of these indigenous methods are crude but cheap and can hardly be replaced by machine-made goods unless there is a considerable rise in the standard of living of the people. The tanneries at Cawnpore, Agra, Sion, Bangalore, Madras and Calcutta employ modern machinery and produce tanned leather for export, and leather goods for home consumption.

The exports of raw hides and skins in 1942-43 were valued at Rs. 332 lakhs and of leather at Rs. 482 lakhs. Early in 1919 an export duty of 15% was imposed on hides and skins with a rebate of 10% on those destined to Empire countries with a view to divert the exports from Germany to United Kingdom, but the attempt failed. A 5% duty continued on hides and skins and was abolished in 1934-35 and 1935-36 respectively to encourage exports and thus raise their prices in India to the benefit of their dealers but to the disadvantage of the tanners. The products of the industry are well-nigh sufficient to satisfy the demand of consumers, yet various industries imported machinery-belting worth Rs. 49 lakhs. Boots and shoes worth Rs. 15 lakhs were also imported. The latter imports are unnecessary but they

will contiue as long as Europeans, and some Indians also, will insist on having foreign products.

The war has given a tremendous fillip to the leather industry of the country and its entire resources were directed towards the satisfaction of the requirements of war and war personnel. There was not only complete stoppage fo foreign goods but the war theatre in the Middle Far East was supplied from Indian production. An enormous increase in the price of boots and shoes had to be checked by Government in the interest of the public.

§ 13. **Film Industry.**—The Indian Film Industry claims to occupy eighth place among the industries of India. It is only 31 years old. Its development has been both extensive and rapid. There are about 75 film producing concerns with about Rs. 17 crores invested in the production, distribution and exhibition branches of the industry supplying livelihood to 40,000 people. Bombay has been described as the "Hollywood of India" from where the industry spread to other provinces and is now well-established in Bengal and Madras. The principal film producing studios are located at Bombay, Poona, Kolhapur, Calcutta, Bangalore, Madras, Lahore, Lucknow, Jubbulpore and Karachi.

The Indian film industry has to face severe foreign competition specially from America and Britain, the two sources of import of English features and shorts, as can be seen from the following :—

Year	Features		Short	
	Indian	Foreign	Indian	Foreign
1924	59	405	26	903
1928	117	598	120	1009
1932	237	393	96	1133
1936	229	399	97	1425
1940	162	201	?	826

The greatest handicap of the industry is the absence of raw-film manufacturing enterprise in India while a heavy duty is imposed on raw films imported from abroad. The scope for this industry is enormous in a sub-continent like India with potential customers numbering 40 crores, most favourable weather conditions and unparalleled scenic background for film-shooting.

4. Minor Industries and Plantations

§ 14. **Minor Industries.**—This discussion includes only important industries and is not meant to be exhaustive. There are a number of other industrial enterprises scattered all over the country. Of recent growth, though industrially more important, are the *chemical industries* manufacturing heavy chemicals, the biggest concern being the Indian Chemical Industries; the *chemical and pharmaceutical works* led by the Bengal C. & P. Works and counting two newly opened at Lucknow and Patna; *cabinet making* scattered throughout the country, Bareilly being the centre in U.P.; *turpentine* and *resin* factory like that of U. P. Government, situated at Clutterbuckganj near Bareilly and one in the Punjab. Among others, mention may be made of *hosiery factories*, 40 in number, yet having succeeded in supplying only a fraction of Indian market which is gutted with Japanese goods. The development of *soap*, specially of cheap washing kind, has been rapid and the demand for soap in the country has simultaneously gone up. Yet for superior-quality soap the consumers depend on imports. There is a good number of *breweries* and *distilleries* manufacturing cheap liquors, while large *cutlery* factories like those at Aligarh and Wazirabad are content with making common locks, knives, scissors and other articles of inferior quality as they lack both efficient organization and expert skill. The *coir making* is a monopoly of

Madras Presidency in India centred in the regions of Malabar coast, Cochin and Travancore, doing a flourishing export trade which was valued at Rs. 86 lakhs in 1942-43.

§ 15. **Plantation.**—The two other industries employing more of manual labour and less of machinery, yet no less important, are Tea and Coffee.

Tea.—It is the most important plantation crop. Since 1875 the area under tea has increased 400% to 834,000 acres and production has increased more than 10 times to 501,000,000 lbs. in 1941. Its consumption in the country is low, only 0.2 lb. per head as compared to 9·2 lbs. in United Kingdom, though India supplies more than 40% of the world demand. In 1938-39 the exports amounted to 382 million lbs., worth Rs. 3,957 lakhs of which 90% were destined for England. The chief tea-producing areas are Assam and Bengal and Nilgiri hills in Madras.

Coffee.—Its production is mostly confined to the South. The area under coffee in 1941 was 182,000 acres, its output 280,700 cwt. and exports 48,000 cwts. the lowest since a long time. It was due to the war that coffee industry lost a considerable portions of its export market in France, Norway and Netherlands which were enemy occupied territories during the period 1940—45. The daily average number of persons employed in the plantation during 1937-38 was 66,000 permanently employed and 33,000 temporarily employed.

EXERCISES

1. Give a brief account of the cotton and jute mill industries, and account for their important position in the country.

2. What is meant by a 'key' industry? Of what national importance is the Iron and Steel Industry? Indicate its present position.

3. 'The Indian sugar industry is the second largest industry, next in importance to only cotton textiles.' Is this a fact? Trace the progress of sugar industry in recent years. Point out the drawbacks from which it suffers at present and suggest ways for affecting improvement.

4. Give a brief and reasoned estimate of the present state of minor Indian industries and plantation. Which of them are efficiently run and why?

5. Draw an industrial map of India and account for the localization of the principal manufacturing industries.

6. Which of the Indian industries stand to benefit on account of the present European war?

CHAPTER XII

AGRICULTURE AND COTTAGE INDUSTRIES

1. Agriculture

India is predominantly an agricultural country and about 67% of her population depends upon it for its living as compared to 50, 38, 22 and 7 per cent respectively in Japan, France, U.S.A. and England and Wales, yet in the art of cultivation India still follows the primitive methods. Though, broadly speaking, there are few soils in the world more suited to intensive cultivation, the average yield of principal crops in India compares very unfavourably with the outturn in foreign countries where the farmers have taken advantage of scientific improvements and applied them to agriculture. In the case of wheat, United Kingdom and Denmark produce thrice and four times as much per acre as India's produce of 650 lbs.; in the case of rice, Japan's produce is twice that of India's 1350 lbs. per acre; while U.S.A. and Eygpt produce 1½ and 3 times as much cotton per acre as India's 100 lbs. This backwardness of India's agriculture is due to a number of reasons.

§ 1. **Soil and Manure.**—Few countries in the world possess such rich soil as the alluvium of the Indo-Gangetic plain eminently suited to wheat, rice and sugarcane cultivation. The *regur* or the black cotton soil of Berar, Hyderabad and Bombay is also highly productive. Yet the soil has gone through steady deterioration due to continuous exports of seeds, cotton and other produce which are not returned to it, and it is also suffering from exhaustion after being cultivated for hundreds of years without a break. This loss of fertility can be recouped only by deep ploughing, scientific manuring and a better rotation of crops.

There is everywhere a shortage of farmyard manure composed of the cattle dung, urine and fodder remains secured from the cattle-sheds although the number of cattle maintained in India is very high. This is partly explained by the loss of dung due to the keeping of cattle in the open, and the use of dung as the principal source of village fuel. Hence, the supply of organic matter to Indian soils is deficient. Again, much of manurial material is wasted due to farmer's inefficiency and social prejudices that prevent him from utilizing bone meal and compost manures. Chemical fertilizers cannot pay except in the case of commercial crops like tobacco, sugarcane and market gardening, but enough fertility for other crops can be secured by growing root crops like carrot by rotation and Indian sanai as green manure. Experiments have shown that molasses, which is at present running to waste, is very helpful in fertilizing the soil and, if an extensive use is made, it will prove a very cheap and efficient fertilizer in the neighbourhood of the sugar factories.

§ 2. **Seed.**—The quality of seed ordinarily used by a farmer is poor and no attempt is made to improve the variety. He usually selects a portion of one season's produce for use as seed for the next season, or purchases or borrows grain of indiffernt quality from the village trader. Even when he gets seeds of improved variety from a seed depot maintained by Agricultural or Cooperative Department, his crop is likely to deteriorate as a result of its contact with the inferior-quality seeds being sown in the neighbouring fields. The Imperial Agricultural Research Institute stationed at Delhi since 1936, the Imperial Sugarcane Breeding Station at Coimbatore, and a number of agricultural colleges, experimental stations and demonstration farms maintained by provincial governments have been improving the seeds and popularising their use in the country with the result that now many million acres of land is under improved crops.

§ **3. Capital.**—India is a country of small holdings and farming is carried on with a minimum of capital, the chief item being the team of bullocks. These are on the whole small, ill-fed and inefficient due to diminished grazing grounds and insufficiency of fodder crops, while little headway has been made towords increasing the number of pedigree bulls. Of the implements, the *hal* or wooden plough is the commonest and most widely used. Iron ploughs were being introduced in the years following the Great War, but the fall in the prices of agricultural produce has since lessened their demand. The levelling beam (variously called the *pata*, *patela* or *henga*) is used throughout the greater part of the country for crushing the clods and levelling the field in preference to the harrow and roller. The seed is generally ploughed in by means of a hollow bamboo tied to the handle of the plough or broadcasted, but in some parts of Bombay, C. P. and Madras seed drills and drillholes are used. *Kodali* or a spade is used for digging purposes, *khurpis* for hoeing and weeding, and *hasia* or sickle for cutting the crop. Of harvesting machinery there is none; grain is threshed either by treading out by oxen or beating out by hand, while a *pānchā* or five-fingered rake is used for turning over the crop. Only well to-do farmers can afford the *charsa* or leather bucket, rope and pulleys needed to lift water from the wells. The only form of fixed capital is *kachcha* well. There being no fencing, a plot is demarcated from the neighouring ones by means of narrow boundaries. Only in case of rice fields temporary embankments are made of mud which need repairing and redressing every year. Thus apart from the team of bullocks and water-lifting apparatus, the remaining tools and instruments seldom exceed Rs. 20 in value.

Obviously, the tools and implements used in Indian agriculture are inadequate and inefficient. Yet the more unfortunate feature is that even this capital

does not represent the farmer's personal savings. They have either been purchased with money borrowed from the village moneylender or the Cooperative Society, or have been pawned with the creditor for some past loans owed to him. There are a great many factors responsible for this utter poverty of the farmers and the consequent poor equipment of agriculture.

§ 4. **Irrigation.**—Out of nearly 230 million acres of land cropped per year the means of irrigation are available to only 55 million acres which is rather insufficient. The Government canals and the wells still remain the popular source of irrigation water though tanks and ponds of the village are also utilized for the purpose. The system of lifting water varies from locality to locality yet the common features are its crude nature and wasteful result. On the whole Indian agriculture still largely depends on vagaries of the monsoons and continues to be a losing business.*

§ 5. **Labour.**—Agricultural labour is supplied by the cultivator assisted by his family and the farm labourers. The small cultivator usually performs agricultural operations himself and only on special occasions like weeding and harvesting he draws upon hired labour; but to a substantial peasant-proprietor or a landlord the farm labourers are indispensable. The Indian cultivator compares very unfavourably with foreign cultivator in matters of sharp intellect, scientific cultivation, efficient management and bold enterprise. Though he is recognized by competent observers as a good husbandman and possesses tolerably good health, works diligently and shows dogged, almost religious, perseverance, he is ignorant, conservative and extremely poor. For these handicaps he alone is not to blame; rather he is

---

* See Chapter V on 'Capital in India' for further information on irrigation.

a victim of circumstances. Lack of education explains his ignorance which sustains his conservatism and strong attachment to the primitive art of cultivation. He is slow to learn and realize the necessity and economic advantages of scientific means of agriculture, and as a consequence suffers from inefficiency of management and inevitable poverty. His greatest need is not mere literacy but real education capable of changing his entire outlook on life and agriculture as business. He must shake off his inertia and helpless contentment in poverty and should be educated to desire and strive for an improvement in his material conditions. Leaving fate to take care of itself, he should adopt the principle of effort and enterprise and derive the best he is capable of from land. Along with such an education, the introduction of medical and public health services should help him to maintain better health and work longer and harder with brighter prospects.

The efficiency of the farm labourers is still lower. Unlike the farmers, they have no personal interest in land and hence no incentive to work as honestly and efficiently. Their appalling poverty forces them to remain ill-fed, ill-clad and illiterate and, on the whole, lead a sub-human existence. Their number has been growing and as a result their position has been deteriorating. In 1921 they averaged at 291 per 1,000 cultivators, but the 1931 census revealed their number having increased to 407 per 1,000 cultivators. In the face of abnormal growth of rural population without there being any extension in the area under cultivation, and due to transfer of the fields of the farmers to their creditors in lieu of huge debts, the number of landless labourers has fast multiplied. This increased supply has not only reduced their wages in the country-side, but also created a serious problem of floating unskilled labour in the towns which those labourers visit in times of unemploy-

ment on land. They are disorganized and suffer from all the handicaps to which the cultivators are subjected, and will equally benefit from the remedies suggested for the betterment of the latter.

§ 6. **Organization.**—As referred to above, illiteracy is the greatest evil responsible for the primitive art of cultivation and generally inefficient organization. The pressure of population on land has resulted in *sub-divided holdings*,* too small to secure a farmer's family even ordinary comforts of life. On top of it, they are *fragmented* and scattered over the village area, a feature which leads to the waste of time and labour of the cultivator. Attempts have been made with some success in certain provinces to consolidate the holdings yet the illiteracy and conservatism are hindering the fulfilment of this objective. *Commercialisation* of crops in place of food crops is now more widely taken up with better returns to the cultivator but he is not yet experienced enough to adjust his area and crop to the changing needs of the market. For example, the establishment of many sugar factories in U. P. made it profitable to grow sugarcane and the farmers rushed its introduction rather too fast with the result that now they produce more cane than can be crushed by these factories, and but for the Government fixing a minimum price of cane, their condition would have been pitiable. Another urgent need of the farmer is supply of *cheap capital*. He is already in heavy debt and goes on adding to it, but has to pay exorbitant rates of interest which reduces the profits from agriculture and benefits his creditors more than the farmer himself.

§ 7. **Marketing facilities.**—These are very unsatisfactory. The farmer is ignorant of market prices while as an individual bargainer he is at a distinct

---

* See chapter on Rural Indebtedness.

disadvantage. Moreover, due to poverty and lack of credit facilities he cannot afford to wait till the prices become more favourable. Consequently he is forced to sell his goods when their supply is plentiful and he receives low prices. The Co-operative Sale Societies can render much useful service yet in the *absence of standard grades* and *uniform quality* of the produce, their task is rendered difficult. The office of the Agricultural Marketing Adviser to the Government of India working with the Marketing Officers throughout the country has been collecting the prices (both 'ready' and 'futures') of stocks and movements of some of the principal crops like wheat, linseed and rice, and broadcasting them every week from the All-India Radio Station, Delhi. But this scheme has proved of little benefit to the poor and illiterate cultivator who can neither read a newspaper nor can afford a radio set. Even where under rural development schemes the villages have received radio sets, apart from their educational and entertainment value, they have proved of little commercial service as the market rates broadcast refer to wholesale prices reigning in distant markets and do not relate to the town markets in the neighbourhood where the villagers sell their produce.

The most successful way to help the farmers realize better prices for their produce will be for the Co-operative Societies or some other organization to lend them *short-term loans* for 4—8 weeks, out of which the farmers could meet their liabilities like rent, interest and taxes, and *wait* for prices to rise and thus clear more profits. From this realization the short-term credit with the interest due on it could easily be repaid.

§ **8. Central Agricultural Marketing Department.**—The Marketing Scheme was introduced in January 1935 for a period of five years. It was later joined by certain Indian states (200) also which ap-

pointed whole time marketing officers. Its task was to carry on marketing surveys and publish reports on the present system of marketing and suggest improvements in agricultural and animal husbandry products, (ii) to draw up grade specifications of important commodities. Numerous surveys have since been published and many commodities graded. The grading and marking was being done at over 500 centres on commercial lines. During 1943 alone more than Rs. 549 lakhs worth of produce (ghee, eggs, hides, fruits, sugar, cotton, etc.) was sold under the Agmark as compared with Rs. 241 lakhs in the previous year.

2. Cottage Industries

In ancient times the industries of India were famous and their products enjoyed profitable markets in Egypt, Greece and Rome. During the Middle Ages, India used to export muslin, shawls, linen and calico, jewellery, embroidery works, perfumes, sandalwood and its oil and several articles of excellent workmanship. Even as late as the beginning of the nineteenth century the textiles of India aroused the jealousy of producers in England who were forced to protect their industries by imposing high duties on Indian goods. Most of these industries were centred in big towns and cities where they flourished under the patronage of kings, princes and their courts, like the ivory and *zari* work of Delhi, marble work of Agra, *Itra* of Kanauj and inlaying of arms in many states in Rajputana. These urban industries were consequently well organized. In the rural area too there were small industries like handloom weaving, oil-pressing, dyeing and the like, but their organization was not so satisfactory, nor their products so fine.

§ **9. Causes of Decline.**—(*i*) Prosperous though these industries were, they could not withstand the competition from machine-made goods that began to

pour into India since the middle of the last century. The Industrial Revolution in England had introduced an era of machinery run with power and had reduced the cost of production. Though the articles manufactured were poor in quality and drab in design, they were cheaper than hand-made goods of India, and suited better the pockets of the average consumer who had been reduced to comparative poverty.

(*ii*) The establishment of British power in India replaced the kings and courts but did not supply the patronage lost to Indian industries.

(*iii*) At the same time the European officers and administrators' love for their home products and the new Indian officials' imitation of Western style forcing them to use foreign goods dealt a death-blow to Indian industries.

(*iv*) The Indian cottage industry workers showed utter lack of enterprize, stuck to their old methods and old types of products, and made no attempt to adapt their articles to the changing requirements of the market, its tastes and fashion. Though they revived to some extent during the Great War when foreign competition was weakened, and during the swadeshi movement in 1906-07 and 1930—32, they are at present struggling for their existence, and have lost their former excellence and importance.

§ **10. Typer of Cottage Industries.**—The cottage industries can be classified under two main heads :

(1) Small village industries, as subsidiary to agriculture, that can easily be taken up by farmers in their leisure time, like mat and *tat patti* weaving, rope and basket making, gur making, hand spinning and hand weaving, cocoon rearing, poultry farming and sheep rearing.

(2) Village and town crafts of small-factory

type to be taken up as independent occupations like leather tanning and shoe making, oil-pressing, poultry and pisciculture, pottery, earthen, wooden and soft toy making, bee farming, carpets and blanket making, silk thread and sari making, preparation of brass wares, wooden wares, enamelled wares, rice and flour milling, biris, cigarettes, soap, button and glass bangle making.

Some of these industries are well esablished and have not only retained but also improved their position in spite of foreign competition. The village tanner and shoemaker is still the main source of supplies of shoes though Japanese and Bata shoes of cheap variety have captured a part of his market. The brass wares of Benares, Moradabad, Tanjore and Kashmir, and wooden wares of West U.P., Punjab and Kashmir are still prospering, while the carpets of Bhadohi, Mirzapur, Agra, Amritsar and Bikaner are finding markets in foreign lands also. The silk weavers of Benares, Mau, Surat, Madura and Ludhiana have firmly established their reputation in the country while the handloom weaving has been adopted as the national industry due to swadeshi movement sponsored by Mahatma Gandhi. In the villages the potter, the oilman, the blacksmith and the carpenter ply their crude crafts as, due to poverty and unprofitable agriculture, no better type of goods are demanded nor supplied. But the other industries like button and soap making, etc., have not been extensively taken up though there is considerable scope for their development. The same is true of most of the village and town industries whose progress is being retarded due to a variety of causes.

§ **11.—Handicaps and Remedies.**—(1) The greatest handicap from which the craftsman is suffering is his ignorance both intellectual and

technical. The curse of illiteracy wide-spread as it is in the country, it affects the industrial worker much more acutely. Steeped in ignorance he plies his crafts in the old crude ways and does not realize the necessity of introducing new technique, appliances and designs in his art.

The facilities for imparting technical training in various arts and crafts are more scanty than those for general intellectual development. A dozen industrial schools and a few weaving centres in such big provinces as the Punjab and the U. P. cannot but fail to solve the problem of technical inefficiency, nor can the introduction of *takli* (hand-spinning) in primary schools do more than satisfy the curiosity of the young student. The skill of the craftsman is the result of the traditional training in the rudimentary forms and parental guidance given from time to time in the course of various processes undertaken by the elders in the family. It cannot enable him to keep pace with the revolutionary changes being introduced in industrial craftsmanship in those countries whose imports compete with our indigenous products.

A wide-spread general education supported with technical training is the only remedy, while later on the craftsman should be kept in touch with the latest improvements by means of papers and magazines, demonstrations and exhibitions organized from time to time by industrial concerns and local and provincial governments.

(2) The second great handicap is the want of capital or cheap credit. As the matters stand, an artisan depends upon the rural or urban *mahajan* for the supply of capital for which he has to pay an interest rate mounting up to 100%; or he borrows the raw material from the *kothiwalas* or the big merchants to whom he undertakes to sell the finished goods and naturally receives a price lesser than what he could realize by selling his wares independently in the

market. Or, he may receive credit at a reasonably low rate from an artisan's cooperative society where there exists one, but unfortunately such societies are few and their services seldom utilized. On the whole, therefore, the artisan has to pay dearly for the supply of credit.

(3) The next problem is that of buying the raw material and the tools and instruments. Here again he fails to buy cheaply in the absence of any organized collective effort on his part and is content to secure the material of indifferent quality available locally. The tools and instruments employed by him are the true copies of those used by his ancestors centuries ago. If he wishes to get improved tools often he has to buy those imported from foreign countries which are expensive to purchase and at times difficult to repair.

This problem of capital can be solved by the establishment of workers' cooperative societies both for the supply of cheap credit and the collective purchase of raw materials and tools and implements. Again, the activities of institutions like those of the Industrial Financing Corporation should be popularized more and more and brought to the knowledge of the cottage-industry workers whose needs and requirements should receive preference and consideration.

(4) The lack of marketing facilities is another drawback. If the handicraftsman is attached to a merchant who supplies him the raw material and in turn purchases the finished article, he is reduced to the level of a mere wage-earner and gets merely subsistence wages while all the profits go to this middleman. Even when the raw material is supplied from a worker's personal resources, he fails to realize good price for his products in competition with other workers and big merchants. Being poor, he cannot afford to advertise his goods widely and, therefore, cannot create extensive market for them. The question, therefore, is not only that of retaining the old and

creating new markets for the handicrafts but also setting up organizations that will assist the worker to buy cheap and sell profitably.

This can be achieved either by workers forming Artisans' Cooperative Societies to buy and sell collectively and wholesale, or better by the Governments supplying raw material or credit through their Industries Departments and marketing the produce through their sales organizations like the Arts and Crafts Emporium. In any case, the middleman must be eliminated if the worker is expected to receive full remuneration for his skill.

(5) The governments of provinces can assist the cottage industries in several other ways too. They can organize shows and exhibitions that are the best means of advertising and popularising cottage-industry products; they can keep the industrial workers in one part of the country fully posted up with the developments taking place in different parts of the country and even foreign countries; their overseas trade commissioners can help by advertising and pushing the sale of Indian wares in foreign markets; and the local and provincial governments can patronise the cottage industries by making it compulsory for their departments to purchase the products of these industries in preference to foreign or mill-made goods to meet their departmental requirements.

EXERCISES

1. Describe the methods followed and the implements used by the Indian cultivator. What improvements would you suggest?

2. "One of the greatest handicaps of Indian agriculture is the endless subdivision and fragmentation of land." Comment. What are the other impediments to the improvement of agriculture in India? How would you remove them?

3. Consider the problem of subsidiary industries in Indian rural economy. Discuss the uses and limitations of hand-spinning as a subsidiary rural industry in India.

4. Examine the question of the marketing of agricultural produce in India. What measure have already been taken in this direction by the State and with what consequences? What further improvements can you suggest?

5. Describe the moneylender and his system and account for the high interest rates charged by him. Is he a necessary evil? How far has cooperation helped the agriculturist to improve his economic position?

6. "Industrial development is India's urgent need at present; but it should not be allowed permanently to overshadow and stunt the growth of agriculture." Comment.

7. What led to the decline of cottage industries in India? Mention the handicaps under which they suffer at present, and suggest remedial measures to improve the state of affairs.

8. In what different ways has the State come to the aid of Indian agriculture and rural industries? What other suggestions by way of improvement have you to make?

9. India has a fertile soil, good rainfall, plentiful supply of labour and no lack of capital. How will you reorganize agriculture so as to inercase agricultural production in India?

CHAPTER XII

RURAL INDEBTEDNESS

Rural indebtedness is at once the cause and the result of India's defective agricultural economy. As the debts owed by farmers are heavy and the interest on them excessive, a major part of the agricultural produce is taken up in paying these dues and the cultivator is left with too little to support himself and his family from season to season. Naturally he takes recourse to additional loans and thus weakens his position still further.

The rural debt was estimated to be between Rs. 900—1000 crores by the various Banking Enquiry Committees in 1930. Since then it has considerably increased due to unprecedented fall in prices of agricultural produce as a result of economic depression. While the prices went down by as much as 50% most of the farmer's money liabilities, as rent, interest and other expenses, remained at the old high level. The deficit had, therefore, to be met from past savings and gold and silver ornaments, and, after the exhaustion of these, from fresh borrowings. As a consequence, the indebtedness of the countryside has risen to a new record figure of Rs. 1200 crores. That this is a huge amount, can be gauged from the fact that the figure of Rs. 1200 crores is more than 35 times the annual revenue from the entire land in the country.

Causes

The causes of this persistent evil can be grouped under these heads: (1) *agricultural*—those that are peculiar to this industry and can be traced to its defective organization; (2) *economic*—over which the farmers can have little or no control; and (3) *social*.

§ 1. **Agricultural Causes.**—(i) *Sub-division and fragmentation of holdings.*—The holdings or areas of land, owned or cultivated by the farmers, are being broken up into units too small to be profitably cultivated. They are definitely uneconomic as they do not provide sufficient scope for profitable investment of the labour and capital that a farmer's family can command. The average holding in U. P. is only 2·5 acres. Of various estimates of economic holdings the minimum has been fixed at 5·6 acres and judging even with this standard more than 56% of holdings in U.P. are decidedly uneconomic. To make the matters worse, the land cultivated by the farmer is not held in one compact block but is fragmented or scattered over the village area in small pieces of different dimensions. As some are situated near and others far away from the *abadi*, the farmer cannot satisfactorily look after all of them. Moreover, carting of manure, conveying of irrigation channels and passage of bullocks, etc., to these scattered plots involve crossing the fields of others and give rise to altercation and law-suits. The farmer cannot possibly manage to sink wells or prepare embankments in all these plots, nor can he adequately arrange for the protection of crops against wild animals and pilferers. Cultivation is, therefore, inefficient and the produce meagre.

Consolidation of holdings is the only remedy to remove the evil of sub-division and fragmentation. A fine example has been set up in the Punjab where over a period of 6 years from 1929 to 1934, 645 Consolidation of Holdings Societies helped in consolidating 350,193 acres of land and reduced the number of blocks from 592,862 to 102,427, thus increasing the average area per holding from ·59 acre to 3·4 acres. What has been done in the Punjab can be achieved in other provinces also, only if the man behind the plough is educated to realize the benefits of self-help and cooperative action. But in order to prevent these

holdings from breaking up in future, steps will be necessary to make the consolidated holdings indivisible either by applying the law of primogeniture according to which the eldest in the family should inherit them, or a member succeeding to them has to compensate other claimants for their share in the family landed property.

(ii) *Insufficiency of irrigation.*—Insufficiency of irrigation is another cause of low productivity of agriculture. Apart from 50 million acres of land provided with artificial means of irrigation, the rest of 230 million acres has to depend entirely on vagaries of the monsoons. An average of 45″ rainfall would have been adequate, but its range from 5″ to 470″ is very unhelpful. Moreover, it is precarious and unevenly distributed over the rainy season. Thus the unprofitable character of agriculture can be attributed to lack of adequate facilities for artificial irrigation more than anything else. A bold and extensive scheme for the construction of canals, and more specially wells, will be the only dependable insurance against the risks of insufficient rainfall.

(iii) *Art of cultivation.*—The art of cultivation adopted in the country is the primitive one. The use of ancient types of tools and instruments may prove the farmer's unchanging faithfulness to tradition, but it pays little compliment to his intelligence and enterprise. Conservatism in our custom-ridden country dies hard and in spite of a quarter of a century's propaganda by Agricultural and Cooperative Departments, only an insignificant progress has been made in replacing the old instruments by the improved variety. Conservation of farmyard manure is not generally practised, the use of compost manure is a novelty, while the serious loss is allowed to continue by using cattle dung as fuel. The practice of leaving the land fallow results in several million acres of land being left uncultivated during the year when the adoption

of root crops and chemical fertilizers can reduce this waste considerably in addition to providing fodder for the cattle.

The inefficiency of organization is apparent on so many sides but two important points are worthy of note. The first is that agriculture is treated more as a source of living or 'a mode of life' than a business intended to yield greater and richer monetary income. The cultivator has to make money payments for rent, interest and wages, and these cost him more than his maintenance as a consumer. His objective, therefore, should be the cultivation of *commercial crops* to bring him high price rather than food crops directly supplying him food grains. In the latter case he can grow sufficient on which to live, yet to meet the money liabilities he has to depend on borrowing and his indebtedness increases. The tendency to introduce commercial crops has recently been evident in U. P. where, following the development of sugar industry, sugarcane cultivation has been undertaken extensively. Yet apart from feeding such big industries, the villagers in the neighbourhood of big towns and cities can conveniently take to market-gardening and fruit-culture and add to their income. The inefficiency arising from uneconomic holdings can, to a great measure, be overcome by a more intensive and scientific cultivation and in this respect the example of the farmers of China and Belgium, who labour under similar handicap, can profitably be followed.

(iv) *Marketing of agricultural produce* is another problem which remains to be solved. The present system of the disposal of produce by the farmer is very defective. The farmer sells the produce either to the village grain-dealer who often happens to be his creditor and takes advantage of his position in fixing the rates that are unfavourable to the farmer; or the produce is collected by a purchaser from the neighbouring town, who profits by the farmer's

ignorance of rates prevailing in the town market. Moreover, he is induced to sell his grain in his village at a reduced price in order to escape the trouble and expense of transporting it to the town and the risk of fluctuating prices there. As soon as the harvest is ready, demands for rent, interest and taxes are pressed on him and compel him to dispose of the produce at a time when due to augmented supplies the prices are generally lower. He thus clears less money from the sale of the harvest than he could manage to earn if he pooled his stock with others and sell it on co-operative lines, or he could be enabled to withhold his supply till the conditions in the market are more favourable and prices higher. This is possible only if some organization could advance him cheap short-term credit on the security of his stock to meet his money obligations, and realize the dues after the sale of the produce.

§ 2. **Economic Causes.**—(i) *Lack of subsidiary industries.*—Agriculture has been shown to be a losing business and the prospects of earning any additional income cannot improve in the absence of subsidiary industries that the farmer could take up along with farming. He has ample time—agriculture providing employment for only 7 months in a year—and cheap raw material is available in the village while there is convenient market in the neighbouring towns. Yet subsidiary work like spinning and weaving, rope, basket and mat-making, wooden and soft toy-making has not been taken up due to lethargy, lack of initiative and enterprise, insufficiency of tools and instruments, and finally the false sense of prestige based on the caste system. It may well be noted that the Japanese toys, mats and matches, German chemicals and Swiss watches are the products of domestic industries. There is no reason why simpler articles mentioned earlier should not be produced in our villages. It is encouraging to note that the progres-

sive policy of the U. P. Government is bringing within the region of practical possibility an extensive development of rural industries by means of supplying cheap electrical motive power in western and eastern districts, by establishing an industrial bank to extend the necessary financial help, and by the organization of marketing facilities for industrial products.

(ii) *System of usury*.—The wicked system of usury is largely responsible for the perpetuation of indebtedness in the countryside. Extreme necessity arising from weak economic position forces a villager to contract loans on exorbitant rates of interest whether for productive or unproductive purposes, and once he falls into the cruel clutches of the village moneylender the debt becomes a legacy to posterity. A borrower will be lucky to get loans at 18% interest on good security though on unsecured loans the rates rise up to 75% and at times exceed that limit. With agricultural incomes at such a low level, the farmer sinks deeper in debts and contracts new and more unfavourable loans to get rid of the older ones. In U. P. the Usurious Loans (Amendment) Act and the Agriculturists' Relief Act of 1934 have drastically reduced the rates permissible by the courts with retrospective effects since 1917, yet the debtors have as yet received little relief while their credit in the market has gone down. It may be suggested here that the best facilities for the supply of easy credit can be provided by the cooperative societies and land mortgage banks the development of which will go a long way to solve the problem of rural indebtedness.

(iii) *Rent and revenue system*.—The payment of rent and revenue in terms of money introduces enormous risk in the village economy. In the first place, the determination of rent and revenue for the settlement period of about 30 years cannot possibly make allowance for the abnormal changes to which agriculture in India is specially liable; and secondly, even

when remissions in revenue are granted by the Government to the zemindars, their full benefit is not passed on to the cultivators. In the present money economy the payment of rent and revenue in kind will upset the entire Government budget and thus be considered impracticable, yet a plea to vary rent according to changes in the price of agricultural produce accompanied with adequate and prompt remissions in times of famine and scarcity will greatly relieve the cultivators who will not be compelled to borrow money for the payment of agricultural dues.

§ 3. **Social Causes.**—(*i*) *Growth of population.*—An excessive growth of population is increasing its pressure on land which is the only source of subsistence to the villagers in the absence of additional source of income from cottage industries. Unluckily there is no proportionate improvement in the art of cultivation and the result is that the yield from land per head of its dependants is falling and their standard of living is being lowered. On the other hand, an increased population has led to a higher demand for land and higher rents which now equal or exceed the economic surplus. There is no wonder that the farmers are living upon their capital and upon the loans contracted for consumption purposes.

(ii) *Extravagance.*—Extravagance displayed by them on social occasions like births, deaths and marriages, also contributes to their indebtedness. Indian farmers are very frugal—they cannot afford to be spendthrift in the face of such low incomes, but are so custom-ridden and, being ignorant, attach such an undue importance to social dignity that on special occasions they will not hesitate to borrow loans if their savings are insufficient to meet the expenditure. The pernicious system of dowry, in addition, has proved the ruin of many a prosperous cultivator and zemindar. Most people realize the evil consequences of these harmful customs, yet few have the courage

openly to protest against them. The spread of educaion and a vigorous propaganda by educated youngmen who may be willing to set personal examples are the only means to eradicate these social evils.

(iii) *Litigation*.—It is too much to say that the villagers love to indulge in litigation, yet it is beyond doubt that the extent to which they depend on the courts for settling their disputes is not good for them. It involves loss of time, money and dignity, and protracted law-suits necessitate heavy loans to finance them. Houses and land are mortgaged and often change hands and yet the repeated visits to the courts do not seem to give the litigants satisfactory solutions of their problems. A little spirit of accommodation shown to neighbours will often prevent many petty complaints, while for the settlement of major disputes the institution of village panchayats with wide powers will prove most helpful and economical.

(*iv*) *Ill-health*.—The ill-health of the ryots is yet another factor responsible for rural indebtedness. The best services of medical and public health departments have been reserved for the towns and cities, while there will hardly be a couple of dispensaries for the entire village areas in a district. The district boards seem to be concentrating on primary education with almost complete indifference to public health duties as is evident from a mere pittance of expenditure alloted to them. Private medical practitioners including even those born in villages establish their practice in the towns in the hope of lucrative career, while the village-folk are left to their quack remedies and silly concoctions. Small-pox and cholera in summer and malaria and influenza in the rainy season stalk the countryside and deprive the farmers of many valuable days when their services are most needed on the fields. In addition, their livestock, the cultivators' most precious possessions, fall victims to various *cattle diseases* and perish in great numbers in the

absence of veterinary facilities. A high percentage of their debts as shown by loans from cooperative societies are contracted for the replacement of bullocks and other cattle.

The above discussion is not exhaustive. The evil of indebtedness is acute, deep-rooted and all-pervading. It is the result of a variety of causes; the remedy,

Expences on marriage, birth, death, religious ceremony and several conventional necessaries.
Flood, Drought, Famine, Epidemics, Miseries,
Duty
Tax
Money lender

likewise, cannot be a simple one. The question of indebtedness is the problem of Indian poverty and it cannot be solved by a mere touching here and tinkering there. While dealing with the causes above, corresponding remedies have been suggested but they will lose much of their efficacy if applied haphazardly and in isolation. A plan is needed to fight this curse

of the countryside, a plan intelligent, comprehensive and far-reaching in its application, that will aim not only at the liquidation of present indebtedness but also at the removal of all chances of its reappearance, that will recognize the entire economic structure to guarantee a substantial income to the villager, and educate him economically and socially to the necessity of leading a less extravagant and more efficient life.

§ **4. War and Indebtedness.**—Has the recent War seen the reduction in the indebtedness of the Indian farmer? Certainly, yes. The most important feature of the war was an enormous rise in prices to above three times their level in 1938-39, and the farmer took full advantage of these favourable conditions to earn most and pay up his debts as best as he could. The conditions of production remained stationary as chemicals and tools and instruments were not available nor was any need felt by the farmer when prices were soaring. Due to conditions totally beyond his power, the farmer had a windfall and his money income increased three fold. A considerable portion of it was undoubedly taken of in purchasing the necessities of life, other than food, contributing to the saving drives and buying silver and gold even at a price level never before touched by these precious metals. Yet there was sufficient left over, and those intending to wipe off old debts had enough means to do so. The actual degree of indebtedness of the farmers will be known after a thorough survey when normal conditions return but it can be said with justification that the amount of indebtedness has been appreciably reduced.

Yet this is only a temporary feature of the credit condition of our farmers. The causes responsible for the pre-war debts still persists and extravagance and litigation are on the increase. Marketing has slightly improved but other factors grouped under Agricultural, Economic and Social

heads earlier in the chapter are still there and there is a radical improvement with regards to these, the farmers are bound to waste their accumulated savings in the years to come and relapse into their original extent of indebtedness. As a matter of fact the danger is that the economic depression that will most probably follow in the wake of the present boom in the country may leave the farmers much worse off than they were before the war started.

EXERCISES

1. What is the approximate amount of rural indebtedness in India? Explain why you regard it as a serious evil.

2. What are the causes of rural indebtedness in India? What steps have been taken so far for stamping out the evil? Have you any suggestions to offer in this connection?

3. Describe the part played by the village moneylenders in India's credit system. Could India's crops be brought to market without their help?

4. Discuss the value of cooperative credit societies as a means of relieving India's agricultural indebtedness. Why does not the replacement of loans from Mahajans, by loans from Cooperative Societies proceed faster?

5. Write out a list of questions you would ask from a cultivator to find out all about his indebtedness at different seasons, and also the answers which you think an average cultivator would give. Hence say how to calculate his indebtedness.

1. HINTS ON WRITING ESSAYS

Before attempting to write an essay on any topic, students should prepare an outline for their guidance. For instance, if they have to write an essay on 'Rural Indebtedness,' an outline of the following type will prove to be of much assistance.

Rural Indebtedness

Outline

Introduction.—Rural indebtedness is at once the cause and consequence of our defective economic structure. The evil is at the same time steadily growing.

Causes.—Of the numerous factors, the more important ones are classed in three groups:—

1. *Agricultural.*—(i) Excessive sub-division and fragmentation of holdings render agriculture less productive. (ii) Lack of irrigation facilities forces agriculture to depend on vagaries of monsoons and thus renders it precarious. (*iii*) The art of cultivation is primitive and unprogressive; the farmer is ignorant of scientific cultivation. (*iv*) Marketing facilities are insufficient and defective.

2. *Economic.*—(*i*) Due to lack of subsidiary industries the farmer is deprived of every chance of adding to his income from farming. (*ii*) High rate of interest snatches away a considerable portion of agricultural produce. (*iii*) Money rents unmitigated by prompt and adequate relief and remissions in times of poor yield and low prices, leave mighty little for the maintenance of the cultivator and his family.

3. *Social.*—(*i*) rapid growth in population increases its pressure on land and reduces individual

income as no improvement in productive efficiency accompanies it while the rents have a tendency to rise. (*ii*) Expenditure on conventional necessities is often obligatory and extravagant. (*iii*) Resort to litigation results in all-round waste without stable solution of disputes. (*iv*) Absence of medical and public health services and veterinary facilities is responsible for diseases and deaths among farmers and their livestock with attendant expenditure and loss.

Remedies.—To fight the evil is needed a comprehensive plan of economic development and social reform, details of which are to be given.

(*N.B.*—Throughout the essay the basis of discussion adopted should be that any factor, that reduces or limits a farmer's income, or increases his expenditure and adds to his liability, leads to poverty and to indebtedness.)

With a view to ascertain the extent of a person's indebtedness, it is necessary to know his income and expenses, in other words, to know his budgets of production and consumption. The process of collection of information regarding the consumption budget having already been given, a specimen of a cultivator's production budget is given below so as to acquaint the student of the type of a production budget.

2. Cultivator's Production Budget

Rajaram Singh is a resident of Pratap Patti, Post-Office Shivapur, District Benares. He is 38 years old, married, and has 2 sons of 15 and 3 years. His widow mother of 57 lives with him. Rajaram passed the Vernacular Final Examination in 1916, and after serving in old jobs in the city of Benares for 5 years, he finally settled down to cultivation. He is intelligent and resourceful and has no prejudices against personal labour on his field. He is an occupancy tenant of his plot of 4 bighas of arable land.

It enjoys the facility of canal irrigation, though the level of the land being high, canal water has to be lifted.

The budget relates to the *Rabi* season :—November 1937—April 1938.

I. Processes and wages—

Processes	Period of work	Labour employed.	Wages	Remarks
Ploughings (Thrice)	9 days	...	...	Outside labour is engaged for some of the processes. Rajaram and his son also work with the labourers.
Levellings (Thrice)	2 days	...	...	
Sowing ...	2 days	...	...	
Irrigation (Twice)...	10 days	2 men	3-2 0	
Weeding	4 days	2 women	1-0-0	
Reaping	2 days	2 men	0-10-0	
Thrashing... ...	5 days	I man	0-12-0	
			5-8-0	

II. Depreciation and repairs—

Total and Instrument	Cost	Life	Depreciation and repairs	Remarks.
Bullocks	40-0-0	10 yrs.	2-0-0 8-0-0	Feeding charges for salt and oil cakes etc.
Plough	2-8-0	4 yrs.	0-5-0 0-2-0	For reshaping the blade
Levelling beam ...	0-8-0	8 yrs.	0-0-6	
Yoke	1-4-0	4 yrs.	0-2-6	Sharpening and replacing of a handle.
4 Khurpis	0-12-0	4 yrs.	0-1-6	
6 Baskets	0-6-0	1 yr.	0-1-6 0.3-0	
Ropes and others ..	0-2-0	½ yr.	0-2-0	
	45-8-0		11-2-0	

III. Raw Material.—Seed 1 maund and 30 seers at 10 seers a rupee cost him Rs. 7/-/-. Manure was mostly prepared by the cultivator though he had to purchase one cart-load from a neighbour for -/8/- Total raw material was worth Rs. 7/8/-.

IV. Interest.—Rs. 7/- worth of seeds were borrowed and the interest for 6 months was at -/-/6 per rupee per month, *i.e.*, Rs. 1/5/-.

V. Irrigation.—Irrigation water cost him Rs. 9/-/- at Rs. 2/4/- per bigha. Two men were engaged for assistance in lifting water. Their wages are included under Section I—Wages.

VI. Rent.—Land is very fertile yet due to occupancy rights he has to pay only Rs. 3/4/- a bigha. For the season rent was, therefore, Rs. 6/8/-.

VII. Produce Sold.

Article	Quantity	Rate	Value
Wheat	37 maunds	12½ sr. a rupee	Rs. 118 6 6
*Bhoosa ..	45 maunds	50 sr. a rupee	36 0 0
			Rs. 154 6 6

* 50 maunds of Bhoosa was withheld for feeding the bullocks, and 4 maunds of wheat for home consumption.

Marketing

Wheat and Bhoosa were sold in Benares. Rajaram had to hire a cart and his own bullocks carried it to the town in three instalments.

	Rs.	a.	p.
CART HIRE	1	8	0
OCTROI IN BENARES ...	3	0	0
BAYAI (Commission to agent) -/-/3 a rupee ...	2	6	6
INCIDENTAL EXPENSES ...	0	4	0
	7	2	6

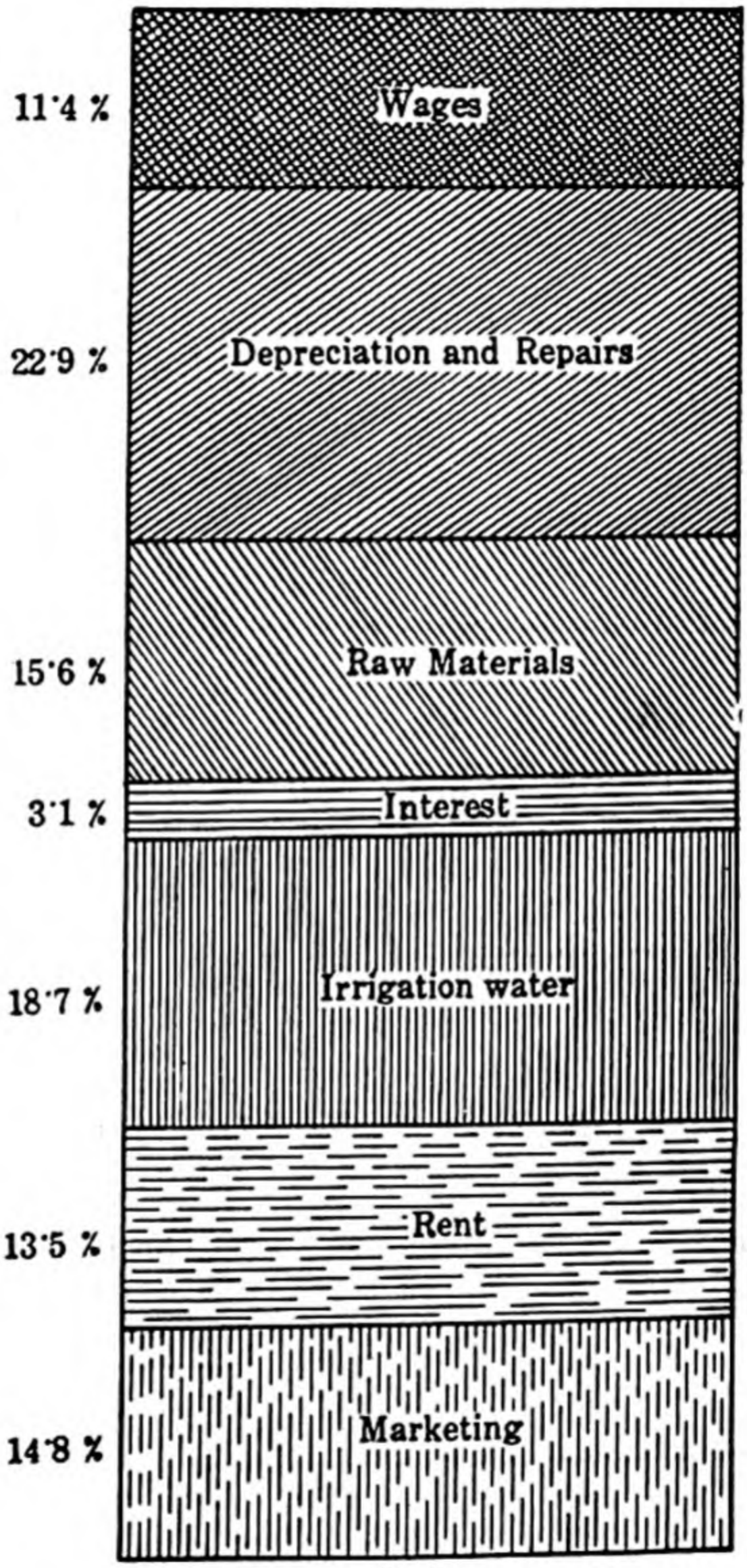
PROFIT AND LOSS ACCOUNT

Expenses				Income			
	Rs.	a.	p.		Rs.	a.	p
1. Wages ...	5	8	0	Wheat	118	6	6
2. Depreciation and Repairs ...	11	2	0	Bhosa	36	0	0
3. Raw materials .	7	8	0				
4. Interest ...	1	5	0				
5. Irrigation ...	9	0	0				
6. Rent	6	8	0				
7. Marketing ...	7		6				
8. Profit	106	5	0				
TOTAL ...	154	6	6	TOTAL ...	154	6	6

SUMMARY OF EXPENSES OF PRODUCTION

Item	Amount			Percentage to total
	Rs.	a.	p.	
1. Wages	5	8	0	11·4
2. Depreciation and Repairs ...	11	2	0	22·9
3. Raw materials	7	8	0	15·6
4. Interest	1	5	0	3·1
5. Irrigation	9	5	0	18·7
6. Rent	6	8	0	13·5
7. Marketing	7	2	6	I4·8
	48	1	6	100 %

Diagrammatic Representation of Expenses of Production.



Scales
1" along Altitude = 20 %
1" along Base = Rs. 24

EXCHANGE

CHAPTER I

EXCHANGE AND VALUE

§ 1. **Exchange defined**·—Under this department we study the lawful and voluntary activities of man whereby wealth changes hands, and ignore dishonest means of transference of wealth as through swindling and theft. Exchange consists in changing the ownership of wealth or a transfer of wealth of a person to another in lieu of the other person's wealth. Thus in exchange there are two parties both of which willingly undertake to exchange a commodity which one possesses for the commodity the other offers. If *A* offers out of his sweet will his book on Logic to *B* in consideration for *B*'s fountain pen, and *B* is also willing to have that book rather than keep his fountain pen, an exchange can take place.

2. Kinds of Exchange.—Exchange may be an exchange by *Barter or by Sale and Purchase*. Barter is that type of exchange in which commodities are paid for in terms of commodities and money is not used as a means of payment. In Sale and Purchase goods are exchanged for money and not for other goods. The example cited above when a book is changed for a fountain pen, is an instance of barter. But when a stationer parts with a book on Logic for a student's Rs.5/- it is exchange by sale and purchase —sale from the side of the stationer and purchase from the point of view of the student.

§ **3. The Conditions of Barter.**—The above illustration brings out clearly the conditions essential to any act of exchange by barter. *Double coincidence* or bringing together of two persons each requiring what the other can offer or must be achieved. If *A* was not in need of the fountain pen that *B* could offer, nor was *B* in need of the book that *A* was offering, no exchange would have been possible.

After this double coincidence has been secured, the two parties have yet to compare the utility given

up in parting with the article possessed by each and the utility got on receiving the article offered by the other. If *to each of them it means a net gain*, exchange takes place. Conversely, if an exchange has taken place, it should be understood that from the point of view of the exchanging parties it has been advantageous to both of them.

§ **4. Gain in Utility by Exchange.**—To see how exchange benefits both the parties at a bargain, let it be assumed that there are two persons, one having eight skins and the other having eight arrows. Also, let them be named *S* and *A* respectively. *S* desires to have some arrows while *A* desires to have some skins, and they propose to barter one commodity for the other. If the satisfaction which *S* will get by receiving an arrow is more than the satisfaction that he will lose on parting with a skin, he will exchange; and similarly, *A* will be willing to part with this arrow for a skin only when the satisfaction got on receiving a skin will outweigh the satisfaction he will lose on parting with the arrow.

Suppose the following schedule represents the utility of the successive skins to *S* and that of the arrows which he expects to receive from *A*, and the utility of successive arrows to *A* and that of the skins he expects to receive from *S*.

Units of skins or arrows	Utility of skins to *S*	Utility to *S* of arrows he expects to receive	Utility of arrows to *A*	Utility of skins that *A* expects to receive
1	100	85	107	91
2	85	69	64	80
3	71	57	82	70
4	58	46	71	61
5	46	36	6I	53
6	35	28	52	46
7	25	21	44	40
8	16	15	37	35

When *S* gives away one of his skins, he loses 16 units of utility, the marginal utility of 8 skins, but by getting an arrow he secures 85 units of utility. The net gain being 85—16 or 69 units. The bargain is advantageous to him. *A* gives away 37 units of utility on parting with his arrow, it being the marginal one, and gets 91 units of utility by securing a skin from *S*, and thus gains 91—37 or 54 units. The bargain is advantageous to *A* also. They will thus carry on exchange till *S* finds on comparison that on giving up the fourth skin he loses 46 units of utility, a loss which is just compensated by the fourth arrow he is getting to bring him 46 units of utility. Similarly, *A* gives up fourth arrow thereby losing 61 units of utility which is just compensated by the fourth skin he is getting to give him 61 units of utility. They will not go any further as it will mean a loss to both. To *S* fifth arrow means 36 units of utility for which he will be paying 58 units of utility by parting with the fifth skin counted from the bottom. Similarly to *A*, fifth skin will bring 53 units of utility but his fifth arrow will take away 71 units of utility.

Here exchange has been advantageous to both the parties. *S* has given up 4 skins with a total utility of 16+25+35+46 or 122 units and has secured 4 arrows with a total utility of 85+69+57+46 or 257 units, thus making a *gain* of 257−122 or 135 units of utility. On the other hand, *A* has exchanged 4 arrows measuring to him a total utility of 37+44+52 +61 or 194 units for 4 skins of a total utility to him of 91+80+70+61 or 302 units, thus *gaining* to the extent of 302—194 or 108 units.

§ 5. **Difficulties in Exchange by Barter.**— *(i) Difficulty of establishing double coincidence.*— When people had no money, exchange by barter was indispensable but nonetheless inconvenient. The conditions of barter themselves have been responsible for great inconvenience to people. One can imagine

S carrying his skins on his shoulders and knocking about from door to door in search of a person who could offer him his arrows and at the same time would like to have his skins in exchange. What a waste of time and energy in bringing about this double coincidence!

(*ii*) *Want of a means of division and subdivision*.—After the difficulty of double coincidence was overcome, there came up the great inconvenience faced by a person who had, say, a cow and wanted in exchange for it a dozen of arrows, a mat, some fruits and an article of dress. It was not easy for him to come across one who could supply him all his requirements. If one such person could not be found, two or more could not serve the purpose by jointly meeting his requirements as all of them could not keep the same cow at the same time, and its limbs distributed among them would result in loss of value. Supposing he found out another person who could offer him all he wanted, there was nothing to ensure that the owner of the cow got at least as much utility as he lost in the transaction. If he calculated the total utility of all the articles received to be equal to three-fourths of the utility of the cow, he could not possibly keep back a quarter for himself. Thus exchange by barter involved a loss of labour and time and sometimes a loss of value to a party.

(*iii*) *Difficulty of fixing the rate of exchange in the absence of a common measure of value*.—Last of all the parties had to face the difficulty of settling the rate at which exchange would take place. They had no common article in terms of which each could measure the value of his respective goods to be exchanged. The only way, though indefinite, was the subjective consideration of the utility gained and the utility lost, but it was not always easy to do this. Utilities can be measured and compared with some degree of approximation if both the articles satisfy

similar wants like milk and orange, but not even such a successs is possible in the case of two commodities of widely different use as a hat and an orange. Sometimes it was impossible to fix any rate of exchange. If one of the parties had only one unit of an article of great utility, and wanted in exchange for that thing several units of an article of a low utility, *e.g.*, a deer to be exchanged for arrows, a rate was out of question. The person possessing the deer could not compare its marginal utility he expected to derive from successive arrows and, therefore, no rate could be fixed.

§ 6. **The Place of Exchange in Modern Economic Life.**—*Benefits of Exchange.*—It will be impossible to overestimate the importance of exchange in modern economic life. The least that can be said is that exchange is indispensable today, and the prosperity and progress of economic effort amongst us determined by the efficiency of exchange organizations.

(*i*) *Division of Labour.*—In the absence of exchange the division of labour could not be such a success as it is. Each individual specializes in the production of that article or that part of it for which he is best fitted. Every nation, similarly, specializes in the production of that commodity for which it has the requisite resources. Thus the productive efficiency of each individual and each nation is increased.

(*ii*) Exchange also helps in the localization of industries because each region or country concentrates on the production of a particular commodity or a particular group of commodities rather than attempting to make all the commodities needed by people there. And later there springs up trade between regions and countries. Thus interprovincial and international trade prospers on the basis of exchange.

(*iii*) This specialization is sustained because of the confidence which an individual feels that his produce in excess of his own requirements will be ex-

changed for the produce of another individual which he himself needs. Therefore the resources of individuals and, likewise, of nations are better utilized.

(*iv*) Exchange increases the scale of production due to specialization and localization of industries, extends markets and equalizes prices over wide areas, thus distributing the benefits of industrialization realized in one region to the people inhabiting distant places.

(*v*) Our wants are varied and are multiplying. It is neither possible nor profitable for an individual or a country to produce all its requirements. Exchange enables them to get the requirements from others at a lower cost.

§ 7. **Value.**—All economic goods have value or value is an attribute of wealth. By value of a commodity is meant the *power of its being exchanged for other commodities.* It is measured by the quantities of other commodities that can be had in exchange for it. For instance, the value of a fountain pen may be a ton of coal, or two tea tables, or three hats and so on. But the best way to measure it is in terms of money because money expresses the value of an article definitely and concisely and removes the necessity of remembering a number of ratios. Rather than estimating the value of a pen in terms of coal, tables, hats and other commodities, it can simply be expressed in terms of money and said that its value is Rs. 5/-.

When the value of a commodity is expressed in money, as above, it is called its *price.*

It should be clearly noted that value is inevitably relative. The value of one commodity is always expressed in terms of another commodity. There is nothing as intrinsically valuable; that is, there is nothing inherently in the thing itself to enable it to have value. Value should be understood only as exchange value or as value-in-exchange.

§ 8. **Value of Money.**—Just as the value of an

article can be expressed in terms of other commodities or money, similarly the value of money can be expressed in terms of other commodities. The value of money is the quantity of a commodity that can be had for a unit of money. If a rupee purchases ten seers of wheat, *its value or purchasing power* is ten seers of wheat.

The expression 'value of money' may also mean the face value or the intrinsic value of a unit of money as that of a rupee in India. Again, in the business world, value of money is often used to mean the rate of interest at which money is available.

§ 9. **Value and Utility.**—(*i*) *Value and Total Utility*.—The value of a commodity has *nothing to do with its total utility*. None can deny that the total utility of a tumbler of water is great, much greater than that of a fountain pen; but while the fountain pen has such a high value water has almost none. On the other hand, a pair of spectacles that does not fit a person has no utility to him even as looking-glasses; nevertheless it commands good value in exchange.

(*ii*) *Value and Marginal Utility*.—The value of a commodity *varies with its marginal utility*. It is high if the marginal utility is high, and low if the marginal utility is low. Free goods of nature like air, water and sunshine are so abundant that nobody cares to own them; their marginal utility is, therefore, as low as zero and hence their value is nil. Economic goods, on the other hand, are not so plentiful as free goods. Their marginal utility is above zero; consequently they command value and people care to possess them. Of two economic goods one that is available in *proportionately* smaller quantity will possess greater value. For instance, if the people of the world like to have 1,000 units of gold of which only 40 units were available, whereas their need for silver was 1,000 units of which 800 units were available,

gold then would have greater value than silver. The value of wheat in times of famine rises over its value in normal years, not because wheat in famine years is more nourishing but because it is *scarcer*, that is, available in lesser amounts than the requirements of the people.

EXERCISES

1. How does exchange arise? Do both the parties, whether individuals or nations, gain in utility by exchange?

2. What is "barter"? Under what condition is it possible? Does this system still prevail in the locality from which you come?

3. What are the conveniences of barter? How are these difficulties removed?

4. Define 'value'. What is meant by the expression 'value of money'? Discuss all its possible meanings.

5. Distinguish between 'value' and 'price'. Can there be a general rise or fall in (*a*) values, (*b*) prices?

6. How is value related to utility? Explain why the utility of each successive *chapati* differs with the hunger of the consumer, while the price paid for each of them does not.

CHAPTER II

DEMAND AND SUPPLY

§ 1. **Desire, Want and Demand.**—As explained before, desire is a *mere wish* for a commodity without implying any idea of payment for the desired article. But want is an effective desire backed by both the means to pay and the willingness to pay. Thus the difference between desire and want is that while in case of desire the question of payment does not arise at all, in case of want the ability of the person to pay and his willigness to pay are both present though *there is no definiteness about the amount of payment.* A consumer having Rs. 50/- to spend, can certainly afford to pay for a hat and he may be willing to pay the reasonable amount for it but, because the idea of *how much he would pay for it* has not taken a concrete and definite shape in his mind, it is only his want. As soon as he estimates the utilities of the hat to be, say, 100 degrees, measures them in terms of money, say Rs. 10/-, and *offers* this amount for the hat, his want has grown into demand. Thus demand implies the offer of a definite amount of money for a certain commodity.

§ 2. **Demand Defined.**—Demand is the *amount of a commodity a person is willing to purchase at a given price.* If he is willing to buy 16 dozen mangoes at 9 annas per dozen, his demand is for 16 dozen mangoes at that rate. There can be no demand without price; therefore in expressing a demand both the quantity of a commodity and the price which the buyer is offering for it should be mentioned.

§ 3. **Demand Price.**—The *price that is offered* by the purchaser *for a certain commodity* is called the demand price. In offering that price the purchaser

is influenced by the marginal utility he expects to receive from the commodity and the utility of money he is about to part with for each unit of the commodity. This comparison between utility gained and utility lost is essential and the purchaser will not pay more than what the marginal utility of the commodity is worth to him in terms of money. If he is offering 9 annas a dozen for 16 dozen mangoes, it should be understood that he expects to derive 9 annas worth of utilities from the 16th dozen of mangoes.

§ 4. **The Law of Demand**.—The law of demand states that *the quantity demanded increases with a fall and decreases with a rise in the price of the commodity, other things remaining constant.* If the purchaser has to pay a higher price for the mangoes, say 10 annas a dozen, he will curtail his demand so as to bring up the marginal utility of mangoes to this higher level and may offer to purchase only 12 dozens. And he may buy more than 16 dozens if the price were lower than 9 annas a dozen. At 8 annas per dozen he will find the marginal utility of 16 dozens worth more than this sum and he could increase his demand till with 21 dozens the marginal utility is brought down to the level of 8 annas.

The phrase 'other things remaining constant' stands for the assumptions that the prices of all commodities other than the one under consideration, the money at the disposal of the purchaser and his taste for the commodity remain constant. But this condition is hardly ever fulfilled as the taste, means and fashions of purchasers keep on changing. It may, therefore, happen that the change in demand due to a change in price differs from what may be expected otherwise.

The quantity demanded will not, however, go on increasing if the price falls very low. For if it falls to one pice dozen, evidently the consumer will not like to purchase hundreds of dozens as the huge quantity

will not be worth the trouble of eating. Similarly, if the prices rise, the quantity demanded may remain the same. Due to the urgency of want, a person may demand 7 dozens at -/12/- and the same number at -/14/- per dozen. And yet again the demand may vanish at very high prices. For example, if the price were as high as Rs. 2/- a dozen, he may find mangoes much beyond his means and may buy none of them.

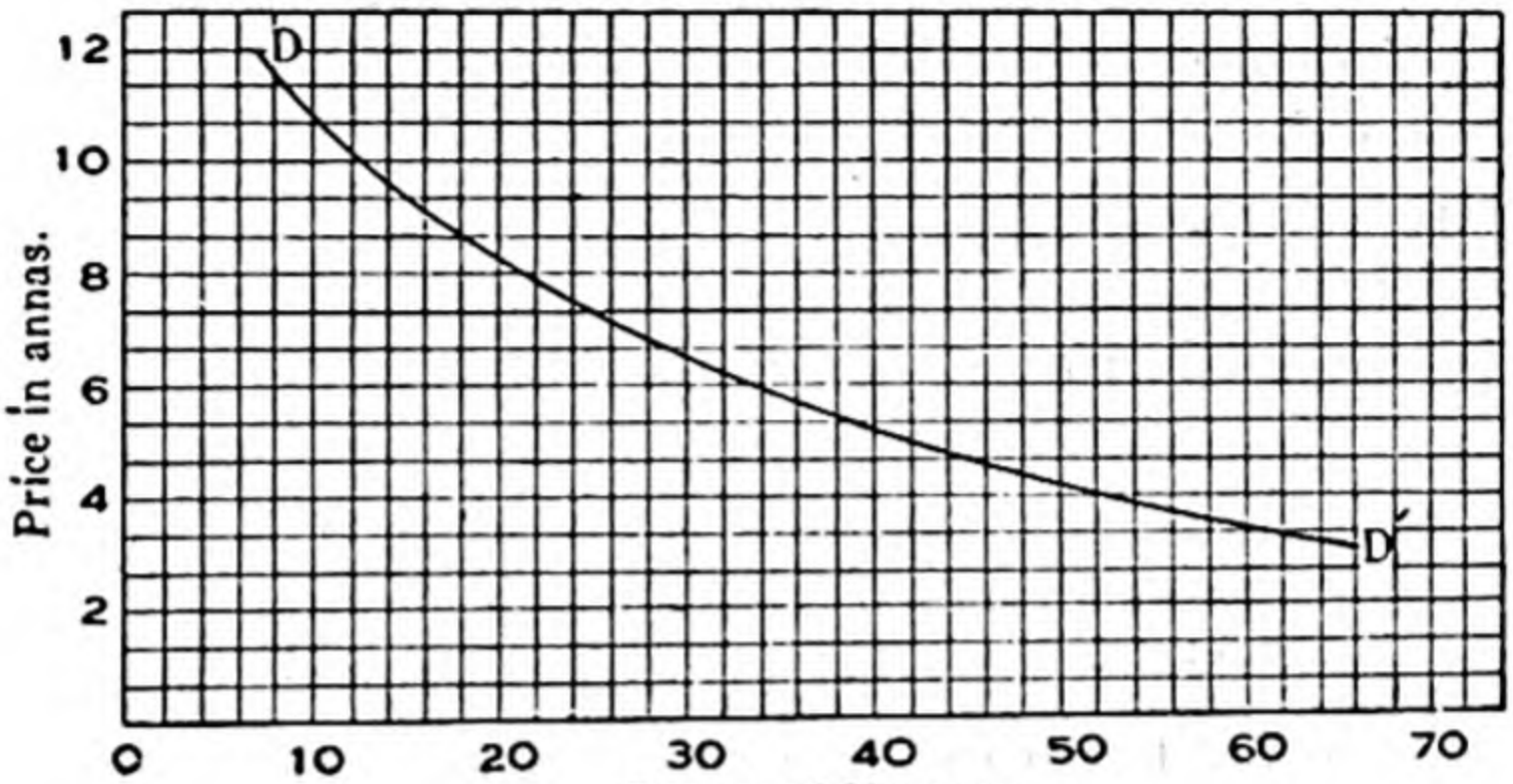
§ 5. **Demand Schedule.**—It is *a list of the different quantities* of a commodity which will be bought at *different prices*, or of different prices at which different quantities of that commodity will be bought. Below is given the demand schedule of a rich man for mangoes as it stood in the fruit market of Lucknow on June 15, 1941 at 10 A.M *Time* and *place* are mentioned in giving the demand schedule because the demand of a man for a commodity may not remain the same with a change in time and place.

DEMAND SCHEDULE

Price	Demand
12 annas	7 doz. of mangoes
11 ,,	9 ,, ,,
10 ,,	12 ,, ,,
9 ,,	16 ,, ,,
8 ,,	21 ,, ,,
7 ,,	27 ,, ,,
6 ,,	34 ,, ,,
5 ,,	41 ,, ,,
4 ,,	51 ,, ,,
3 ,,	66 ,, ,,

§ 6. **Demand Curve.**—By representing the demand schedule graphically we get the demand curve.

In the accompanying diagram the prices have been measured along OY and the quantities along OX.



By plotting the points and joining them we get the demand curve shown as DD.

§ 7. **Collective or Social Demand, or Demand in a Market.**—All the purchasers of a commodity in a market are not equally rich or poor. The marginal utility of money to the rich having more money is lower than it is to the poor people who possess a smaller amount. Therefore if any article enters into the consumption of both the rich and the poor people, the rich are able to pay higher prices for the same commodity and also buy greater quantities of it than what the poorer people can pay or what they can buy.

Suppose in a market there are three classes of people, the rich, the middle-class, and the poor. Let them be represented by A, B and C. If the mangoes sell at one rupee a dozen, suppose A buys two dozens, B buys only one dozen because to him the marginal utility of money is greater than what it is to A. We take it for granted that the taste and the capacity to enjoy the mangoes possessed by all the buyers are the same. C being a poor man, he does not buy any mangoes at this price because to him the utility of money at this level is much higher than the utility of

mangoes. The same holds good for him even when the price comes down to 13 annas per dozen. It is only at 9 annas that he can afford to buy one dozen. Arguing on similar lines, if a demand schedule is prepared for all of them singly and collectively, it will read as under :

Price per doz.	A's demand in doz.	B's demand in doz.	C's demand in doz.	Total demand in doz.
16 annas	2	1	0	3
13 „	3	2	0	5
9 „	5	4	1	10
7 „	8	6	3	17
5 „	12	9	5	26
3 „	15	13	8	36

If in the market there are 100 such rich men as *A*, 250 such middle-class men as *B*, and 400 such poor men as *C*, then the demand schedule of the whole market will read as follows:

Price per doz.	A's demand in doz.	Demand of 100 such men	B's demand in doz.	Demand of 250 such men	C's demand in doz.	Demand of 400 such men	Demand of entire market
16 annas	2	200	1	250	0	0	450
13 „	3	300	2	500	0	0	800
9 „	5	500	4	1000	1	400	1900
7 „	8	800	6	1500	3	1200	3500
5 „	12	1200	9	2250	5	2000	5450
3 „	15	1500	13	3250	8	3200	7950

§ 8. **Elasticity of Demand.**—According to the law of demand the quantity of a commodity demanded varies *inversely* as the price, that is, if the price of the commodity rises the quantity demanded falls, and if the price falls the quantity demanded rises. This responsiveness of demand following a change in price is called *elasticity of demand*. Since every change in price is reflected in demand, no matter however small, demand for every commodity is elastic. It is more elastic in the case of those commodities whose demand has a more sensitive response to a *given* change in their price, and less elastic in the case of those commodities whose demand is comparatively less sensitive. 'Elastic' and 'inelastic' which are the terms in common use have been replaced in this book by terms 'more elastic' and 'less elastic' which express the meaning more clearly.

§ 9. **Measurement of Elasticity of Demand.**—The most convenient way of measuring the elasticity of demand is by means of total expenditure incurred or likely to be incurred on the commodity in question at different prices. The following three rules are formulated for the purpose:—

1. The elasticity of demand is *equal to unity* when the total *expenditure remains constant* even if price changes.

2. The elasticity of demand is *greater than unity* when the total *expenditure varies inversely* as the price; that is to say, rises with a fall in price and falls with a rise in price.

3. The elasticity of demand is *less than unity* when the total *expenditure varies directly* with the price; that is to say, rises with a rise in price and falls with a fall in price.

To illustrate, consider the following demand schedule for mangoes.

Price	Number demanded	Total expenditure (Number X Price)
8 pice each	11	88 pice
7 " "	13	91 "
6 " "	16	96 "
5 " "	20	100 "
4 " "	25	100 "
3 " "	31	93 "
2 " "	45	90 "

1. Taking 4 pice as the starting price, the demand at this price is 25 mangoes and the total expenditure is 100 pice. When the price rises to 5 pice, the number of mangoes demanded diminishes to 20 but the total expenditure remains unaltered at 100 pice. The same is true if the starting price be supposed to be 5 pice and the new demand at 4 pice considered to rise from 20 to 25 and keep the expenditure constant. Thus the elasticity of demand is equal to unity between the prices 4 and 5.

2. When price rises from 5 pice to 6 pice the number of mangoes demanded falls from 20 to 16. Here the demand is changing more in proportion to the change in the price-level with the result that the new total expenditure of 96 pice is less than the previous one of 100 pice. Similarly, if price were lowered from 6 pice to 5 pice, the demand would rise from 16 to 20 and the total expenditure from 96 to 100. In both these cases the price and expenditure have moved in the opposite directions and thus the elasticity of demand is greater than unity between the prices 5 and 6.

3. If price falls from 4 pice to 3 pice, the demand ascends from 25 to 31 but the total expenditure

descends from 100 to 93 pice. It shows that though the demand rises owing to a fall in price, it does not rise enough to retain the expenditure at the old level. Similarly, when price rises from 3 pice to 4 pice the demand falls from 31 to 25 but the total expenditure shoots up from 93 to 100 pice. In both these cases the movements of price and total expenditure are in the same direction and hence the elasticity of demand is less than unity between prices 3 and 4.

§ 10. **Elasticity of Demand and Price.**—Evidently as we proceed from the price-level 6 downward we notice the elasticity first greater than unity, then equal to unity and after that less than unity. If the price is excessively high—so much so that there is no demand for the commodity—the elasticity will be found to be not only greater than unity but equal to infinity. Similarly, if the price is so low that the consumers have to pay nothing for the commodity the elasticity will drop down to zero. Hence it may be said in a general way that the elasticity of demand for any commodity slides down or mounts up gradually and continuously with the price. It is high for high prices, considerable for medium prices and vanishing for insignificant prices. To illustrate the fact, when tomatoes or any other vegetables come for the first time in the market, they sell at a very high price, the demand for them at that price is low, but it is sensitive (elastic) so that a little fall in the price is enough to cause it to expand considerably. As with the advance in time and increase in supply, their price gets lower, the sensitiveness of the demand decreases; it no longer expands so considerably as it did before. Ultimately when the season of tomatoes is practically over, the price stands at its lowest level and all the consumers are enjoying them; at that time a further fall in the price is not likely to stimulate their demand to any appreciable extent. It may be conceived that a time will come when nobody would like to have any more

tomatoes even for nothing; their demand then becomes inelastic.

§ 11. **Elasticity of Demand for Necessities.**—The elasticity of demand for necessities is less than unity. Let us take the example of salt. It is an article that cannot be dispensed with.

A certain quantity of it is consumed both by rich and poor people, and must be bought whether its price is high or low. If its price is high, only as much will be bought as is really necessary. If its price is low, a little more of it may be in demand, but not very much more because no more than a certain quantity of it can possibly be consumed by a person. Hence the demand for salt varies within fixed limits as a result of changes in its price. There is the lower limit below which the demand will not go, no matter how high the price of salt may be; there is the upper limit beyond which the demand will not move even if the price is very low, so low as zero. The same will hold good with all commodities that behave as necessaries either for the time being or for a particular individual, or at a particular place. The elasticity of their demand will thus be less than unity.

§12. **Elasticity of Demand for Comforts and Luxuries.**—These articles are not necessary either for life or for efficiency or by convention. Their consumption can be postponed if the price is excessively high or may be increasd much if the price is very low. Take the case of soap cakes. None at all may be demanded if they are seling very dear. A great many of them may be purchased for use if they are selling very cheap. Neck-ties, wrist watches, fountain pens and many other articles of fashion fall in this category. Rare articles such as coins and stamps also sometimes behave in the same manner, and out-of-season articles like mangoes in winter, have a similar nature. A student, who is willing to buy 6 neck-ties when they are selling at 8 rupees a dozen, may not

care to buy even three of them, when the price is doubled though he may have the same amount of money, Rs. 4/-, to spare for the ties, because ties are not indispensable. To have six of them at double the price will mean double the expenditure which will not be desirable because the consumer is unable to reduce his expenditure on other commodities to any appreciable extent. And to have only three will not surely involve any extra expenditure, but it will be worth while asking how far an expenditure of even Rs. 4 at that *rate* is advisable. Ordinarily a price of Rs. 16 per dozen cannot but contract the demand to a figure below three, and the expenditure to an amount below Rs. 4. Similarly, it can be shown that the total expenditure on them is increased if the prices are decreased. In other words, the total expenditure on unnecessaries varies inversely as their prices. Therefore the elasticity of their demand is greater than unity. Unnecessaries, however, include comforts and luxuries both. But comforts are neither necessaries nor luxuries. They occupy an intermediate position between the two. Hence if the elasticity of demand for necessaries is less than unity and that for luxuries greater than unity, the elasticity of demand for comforts may be taken to be equal to unity.

§ 13. **Substitutes and Elasticity of Demand.**— Rice is a substitute for wheat. If the price of wheat goes up its demand comes down; the poorer consumers who cannot afford wheat at the high price will start taking rice instead. Similarly, if the price of wheat is lowered, demand for it is stimulated because the consumers of rice are enabled to substitute wheat for rice. Thus in either case, demand contracts or expands rapidly on account of the presence of a substitute for the commodity in question. Evidently the demand for commodities having substitutes is highly elastic.

§ 14. **Commodities having Several Uses and**

Elasticity of Demand.—Where water is sold in buckets as in some dry parts of Rajputana, demand for it will quickly expand or contract according as the price of each bucket is low or high. At high price water will be in demand only for more urgent uses like drinking and cooking, while if the price is low, water will be purchased not only for drinking and cooking but for washing, cleaning and watering of trees as well. Thus the demand for commodities having several uses is highly elastic.

§ 15. **Joint Demand**·—Joint demand exists for the allied* commodities that are required for the satisfaction of a single want or for the factors needed in the production of a single article. Pen and ink are in joint demand; so also car and petrol and shoes and polish. Similarly, for building a house, the building site, bricks, lime, cement, the services of the masons and engineers are in joint demand; and for making a table materials like planks, nails, sand-paper, varnish, tools and instruments, and the carpenter's skill are jointly demanded.

§ 16. **Direct and Derived Demand**·—In a joint demand, the demand for the basic commodity or for the ultimate product which the factors of production help to produce, is called *direct demand*, while the demand for the complementary commodities or the factors needed in preparing the finished product, is *derived demand*. Because demand for the cars gives rise to the demand for petrol, it is to be understood that the cars are in direct demand while the demand for petrol is derived from that for the cars. Similarly, the demand for the house is direct demand, while that for the house-building requirements is derived demand.

It is easy to note that a rise or fall in the demand for the derived demand commodities will follow the fluctuations in the demand for the direct demand

---

* See characteristics of wants.

commodity. A rise in the demand for more tables will mean a rise in demand for materials needed in making tables, just as a fall in the demand for the tables will reduce the demand for the materials.

§ 17. **Composite Demand**.—The composite demand for a commodity is the sum total of the demands for the commodity in its several uses. The composite demand for wood will be made up of the quantities of wood needed for building doors, of the quantities of wood needed for building doors, floors, ceilings, pieces of furniture, railway wagons, ships and various other articles. Similarly, the demands for land for cultivation, buiding, pastures and play-grounds will together constitute its composite demand.

As against joint demand where the demands for various articles are in harmony and rise and fall together, there exists a rivalry between the different uses for which an article of composite demand is required. A boom in the house-building industry may so raise the price of land as to render it too expensive to be used as playground. The extensive cultivation necessitated by the growing population of the country is leaving no scope for the village pastures these days.

§ 18. **Supply**.—Supply is the amount of a commodity that a seller is offering to sell at a certain price. Just as there can be no demand without price so there can be no supply without price. When a stall-keeper offers fifty-five dozens of mangoes for sale, he does so because he is paid for them. If the price offered to him is 9 annas per dozen, it means that he supplies 55 dozen mangoes at 9 annas a dozen.

§ 19. **The Law of Supply**.—The law of supply states that with a rise in the price of a commodity its quantity supplied increases, while with a fall in its price the quantity supplied diminishes.

The entire quantity of a commodity which a seller has stored is called its *stock* out of which he offers for sale different portions according as the changing price of the commodity permits him to do. Of course, the entire stock is meant to be sold away but only at the most favourable price. The guiding principle of a seller is to make the greatest possible profit from the sale of the commodity and he will offer to sell more at rising prices and less at falling prices.

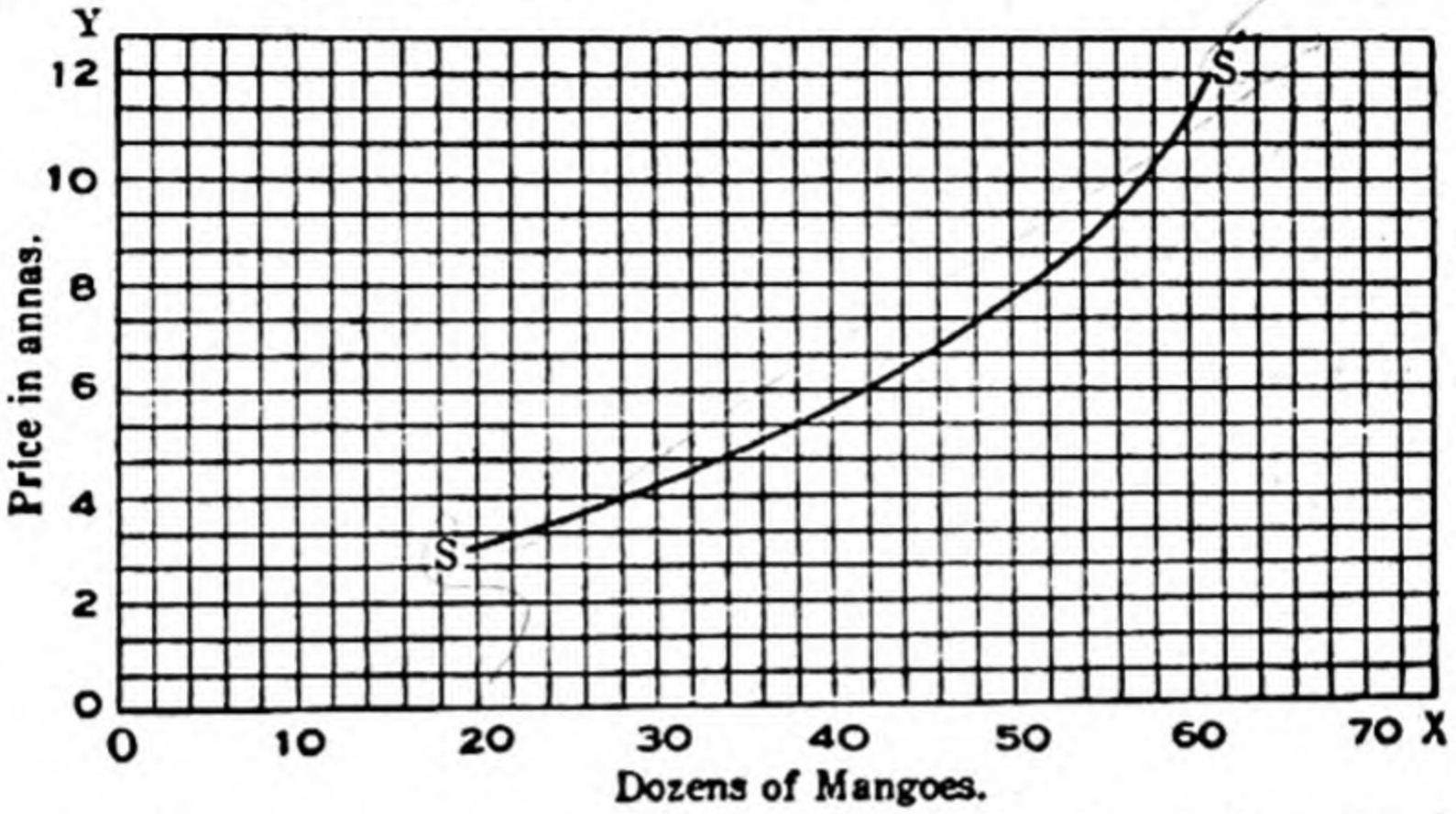
§ 20. **Supply Schedule.**—Supply schedule is a list of prices at which different quantities of a commodity are offered for sale, or it may be called a record of different quantities of a commodity that are supplied at different prices. The supply schedule of a fruit-seller will read as under:—

Supply schedule of the fruit-seller for mangoes in the Lucknow fruit-market, as it stood on June 15, 1941 at 10 A.M.

Price per doz.	Supply
12 annas	61 doz. of mangoes
11 ,,	60 ,, ,,
10 ,,	58 ,, ,,
9 ,,	55 ,, ,,
8 ,,	51 ,, ,,
7 ,,	47 ,, ,,
6 annas	42 doz. of mangoes
5 ,,	36 ,, ,,
4 ,,	29 ,, ,,
3 ,,	19 ,, ,,

§21. **Supply Curve.**—This curve is obtained by representing the supply schedule graphically. Measur-

ing the prices along OY and mangoes supplied along OX, plotting the points in accordance with the



figures given above and then joining them by straight lines we get the supply curve SS.

§ 22. **Joint Supply.**—If two or more commodities are produced from a single set of productive processes, they are said to have joint supply. In joint supply the production of one commodity automatically involves the production of others. Wheat cultivation necessarily yields chaff (bhoosa); cotton growing yields cotton seeds, and coal gas yields coke. Of the commodities of joint supply, the one to the production of which the efforts were primarily directed is called the *main product* while the rest are called *by-products*; *e.g.*, cotton and coal gas are the main products while seeds and coke are the by-products. It is obvious that with an increase in the production of the main product, the supply of the by-product is bound to rise and, with a decrease in it, the by-product will fall in supply.

§ 23. **Composite Supply.**—The supplies coming from different sources to meet a particular demand constitute a composite supply. The commodities that are *substitutes* to one another furnish good illustration of composite supply. Wheat and rice constitute a composite supply for the demand for food; tea, coffee,

cold drinks like lemonade and beer make up a joint supply for drinks. In production, stones and bricks, or labour and capital as factors, furnish similar examples. In these cases the sources of supply act as rivals and, therefore, a greater use of one commodity will reduce the consumption of the other rivals and *vice versa*. The popularity of bricks in building industry will adversely affect the quarrying business, the temperance activity by encouraging the consumption of soft drinks will render beer trade less profitable and the introduction of machinery will throw labourers out of employment.

§ 24. **The Cost of Production.**—The cost of production of an article incurred by a producer is composed of two sets of items, namely, *'expenses of production' and 'normal profits.'*

(*i*) The expenses of production include the payments the producer has to make to those persons who lend their services and material to the producer and thus help him in the act of production. For example, the rent of the land *hired*, wages of the labourers *engaged*, interest on the capital *borrowed*, salaries of the managers *employed*, depreciation on *tools* and *machinery* used, and other charges such as for fire insurance, municipal rates, and taxes like excise duty etc.—all these items make up the 'expenses of production.'

(*ii*) Normal profits are the remuneration which the producer should receive for the contribution of land, labour, capital and supervision (organization) that he makes from his personal resources. The producer, in addition to this external help, also employs his *personal* resources like his own capital, land, labour of the members of the family and his own supervision. For these personal contributions he is entitled to remuneration at the same rate at which he secures similar ones from the outsiders. To illustrate, if out of a capital of Rs. 1,000/- an artisan supplies Rs. 600/- from his own savings and Rs. 400/- is his

borrowed capital on which he pays interest at 5% he should receive Rs. 30/- per year as interest on his own capital. All such payments due to the producer constitute his 'normal profits.'

The sum total of the expenses of production and the normal profits is called the 'cost of production' or, to be more accurate, the 'money cost of production,' as the cost items are calculated in terms of money. If in the case of a gardener his expenses of production amount to Rs. 155/- and normal profits to Rs. 95/-, the money cost of production will come to Rs. 250/-. And if the output of mangoes for the season numbers 1000 dozens, the average per dozen expenses will amount to $2\frac{1}{2}$ annas, the normal profits to $1\frac{1}{2}$ annas, and the cost of production to 4 annas.

§ 25. **Change in the Expenses of Production.**— The expenses of production of an article will change only if there is an alteration in one or the other items constituting the expenses. The expenses will increase if the rent of the land or building hired by the employer rises or he has to pay higher wages to the labourers employed though their efficiency remains the same. Similarly, with the interest, taxes and other charges. On the contrary, a reduction in the payments will diminish the expenses. In a region developing either industrially or agriculturally, rents almost always rise. Through generations the rents paid by Indian farmers have gone on increasing, and the experience of businessmen in the towns either has not been different. Greater unity through Trade Union Movement among the workers has helped them receive better wages. So also has been the case with the Government taxes on income etc. Of course, interest on commercial capital in industrial towns has steadily gone down though the farmers' lot has never been so favourable. Scientific improvements have resulted in better and cheaper machines and thus the item of wear and tear on capital goods has also gone down.

It may be concluded that economic development has a tendency to reduce the interest on capital, but the rent and wages are enhanced. The change in the expenses of production will be influenced by the collective effect of the increase and decrease in the several items composing these expenses.

EXERCISES

1. Define 'Demand', 'Demand Schedule' and 'Demand Curve.' Distinguish between Want and Demand and examine the following statement critically:

"Want of hunger curtails demand for food."

2. "The demand price for a given quantity of a commodity is governed by the marginal utility of that commodity'. Explain.

3. State and illustrate the Law of Demand with assumptions, if any. Show how this law is derived from the Law of Diminishing Utility.

4. Define 'elasticity of demand.' Distinguish between elastic and inelastic demand and give examples. How do you measure the elasticity of demand for a commodity?

5. Explain the following:—"The elasticity of demand is great for high prices, and great or at least considerable for medium prices but it declines as the price falls, and gradually fades away if the demand goes so far that satiety level is reached."

6. Find out which of the following commodities is a necessary, a comfort or a luxury, and give reasons for your answer:

	Quantity demanded of the commodities		
Price	X	Y	Z
4	3	2	4
3	4	5	5
2	6	9	7
1	12	20	11

7. When is the elasticity of demand said to be equal to unity? Measure the elasticity of demand for wine to (*a*) a drunkard, (*b*) a patient, (*c*) a student.

8. What do you consider the elasticity of demand to be in the following cases? Give reasons.

(*a*) Railway journey over short distances when fares are increased.

(*b*) Milk when its price varies widely.

9. What is meant by supply? How does it differ from stock? Prepare an imaginary supply schedule and translate it into a supply curve.

10. State the Law of Supply. Is it true for all persons, all commodities and for all times? Illustrate. Comment on the following statement:—"Demand varies inversely and supply directly with price."

11. Distinguish between 'expenses of production' and 'cost of production.' Estimate the practical importance of this distinction. Show how normal profits are affected by changes in the price of the commodity.

CHAPTER III

BALANCING OF DEMAND AND SUPPLY

§ 1. **How to Determine the Price of a Commodity in the Market?**—In a market there are many buyers and many sellers. Each of the buyers tries to pay the least possible price that he can manage to pay, while the seller tries to charge as much as he possibly can and sell as much of the commodity at that price as he can manage. All this introduces higgling and bargaining, and competition which becomes more complicated as the number of buyers and sellers increases. To understand how a certain price will come to reign in a market where the number of buyers and sellers is usually great, let it be supposed that, to start with, there is only one buyer and only one seller and the commodity in question is mangoes.

§ 2. **Buyer's Maxmium.**—Let *A* be the buyer and *P* the seller with hundred dozens of mangoes to sell. The price that *A* will pay will depend on the utility he expects to derive from the consumption of mangoes. Suppose he decides that his desire to consume mangoes is so great that he would gladly pay one rupee for one dozen of mangoes rather than go without them. Yet more than a rupee he will not pay, as then the bargain will not be worth the price. Of course, he would like to pay as much below this level as he possibly can. This limit, which is the highest for the buyer, and beyond which he will not pay under the ciroumstances, is called the *buyer's maximum* or his maximum demand price.

§ 3. **Seller's Minimum.**—When *P* brings the mangoes to the market, he expects to get a price that is not only enough to compensate him for his cost of producing them but also something over and above it by way of profits. But he would not *like* to accept a price below his cost, in this case amounting to 4

annas per dozen. This is his minimum supply price, or the *seller's minimum*, as we call it.

The seller's minimum, though ordinarily equal to the cost of production, may at times of rather low demand be at a lower level, but will not go below the expenses of production. A seller may forego his normal profits for some time only. But if the demand price has a tendency to be below the level of the expenses of production, the seller would sooner stop production than suffer heavy losses. The mango seller would rather close his shop than sell the mangoes at less than $2\frac{1}{2}$ annas per dozen.

§ 4. **Higgling and Bargaining.**—Having discovered the two limits, the buyer's maximum and the seller's minimum, our object now is to see at what price the mangoes will actually be sold. The seller does not know the buyer's maximum, yet he knows his own minimum, and the price asked by him in the first instance will be more than 4 annas, say, 8 annas for the dozen. The buyer is pleasantly surprised to get this offer which is much below his maximum. But he desires to make a still better bargain from his point of view, and offers only five annas with a look that does not betray his anxiety for not letting the bargain go. The seller receives the offer with outward indifference though he is really happy to learn that even at this price he is making a profit. They higgle further but finally both agree to conclude the bargain, say, at $5\frac{1}{4}$ annas per dozen.

§ 5. **Competition on Demand Side.**—Now introduce the element of competition in these simple conditions of the market. Suppose there is an additional buyer, a richer man than the first, and consequently having his maximum at Rs. 1-2-0. Being richer, he does not mind paying this higher price because to him the utility of money is less than to the original buyer. Both of them visit the same seller, when there is only one present in the market that day. When they ask

P what he will charge for the mangoes, he cleverly asks them to pay any amount they like. The matter is left entirely to them. *A*, the first buyer, offers five annas, but *B*, the second buyer, offers six annas. Here *A* and *B* bid against each other and force the price up to a rupee per dozen. Both of them will be willing to pay this price as it is just equal to the maximum of *A* and below that of *B*. In order to have the mangoes for himself rather than go without them, *B* may offer Rs. 1-1-0. The first buyer will find this price too high as it is higher than his maximum, and he will retire from competition. The bargain will thus conclude at Rs. 1-1-0 for the dozen and will go to *B*. This very high price has been brought up to this level merely by the competition between the two buyers.

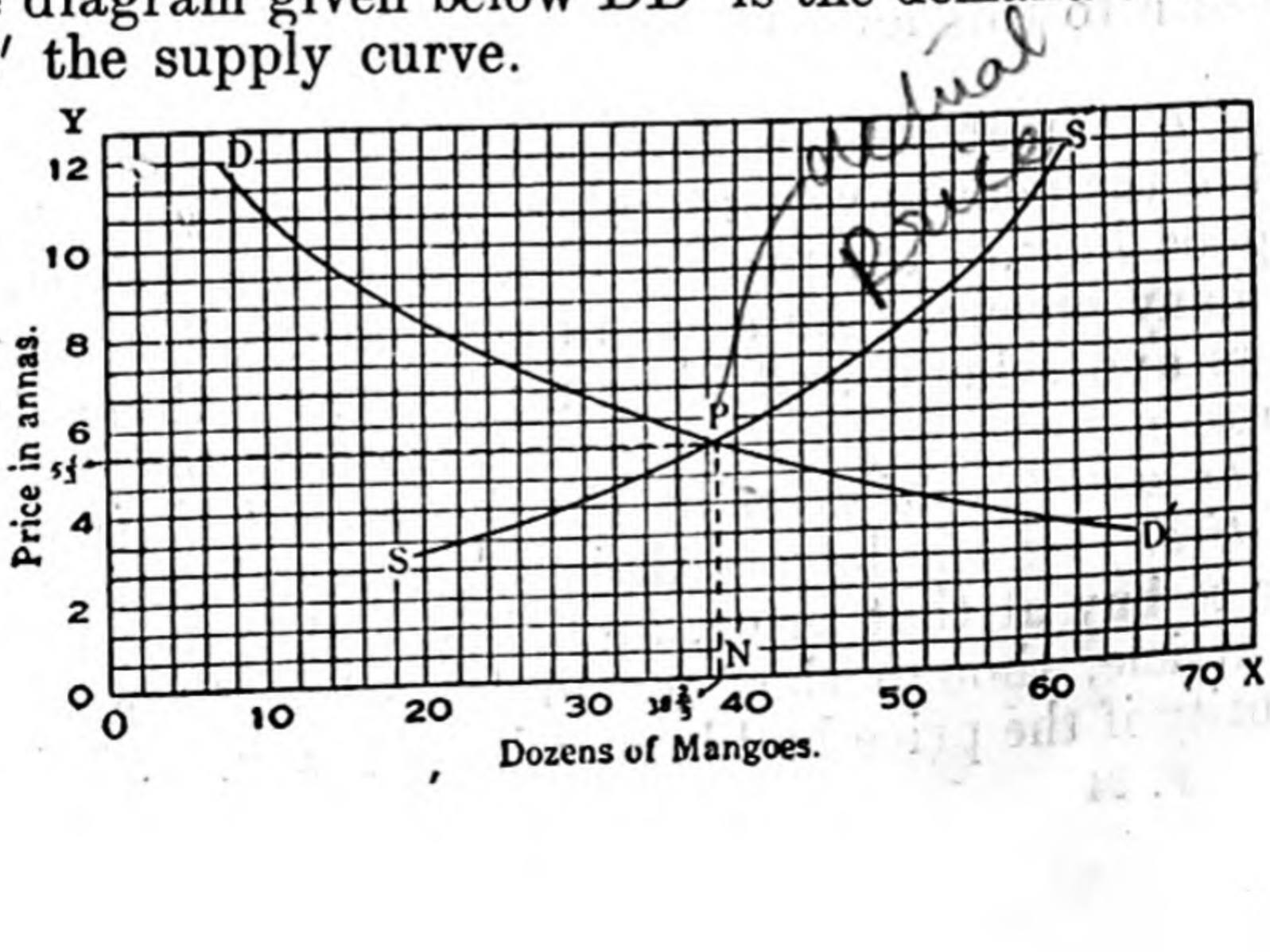
§ 6. **Competition on Supply Side.**—To introduce competition on the supply side, let *P* and *Q* be the two sellers and *A* the only buyer. *Q* is a more efficient producer and the cost of production of a dozen of mangoes to him is, suppose, $3\frac{1}{2}$ annas. *P* and *Q* both anxious to sell their mangoes, will show their willingness to let *A* have them at a lower price. *P* will be outbidden by *Q* offering to sell at, say, $3\frac{3}{4}$ as. a price below *P's* cost of production. *A* will get the mangoes at $3\frac{3}{4}$ as. per dozen, a very low price indeed pulled down to this level by the competition between the sellers.

§ 7. **Double-sided Competition.**—But for the good of the poor buyers there are many sellers and for the good luck of the producers with a high cost there are many buyers. As a result of competition among buyers and sellers, and higgling between these two groups, a *price is fixed at which most of the buyers get the article and most of the sellers sell their commodities.* Of the buyers their are some that are too poor to buy at that price, and they will go without the article, though they would have bought a small quantity if the price had been a little lower. Similar-

ly, among sellers there are some who have too high a cost of production and will go without affecting sale at that price, but they would have sold a quantity had the price been a little higher. Suppose on a particular day the price of mangoes as fixed by market conditions is $5\frac{1}{4}$ as. per dozen, and at this price our buyer *A* purchases $38\frac{2}{3}$ dozens and our seller *P* seels $38\frac{2}{3}$ dozens. Taking the demand of *A* as representing the demand of all the buyers, and the supply of *P* as representing the supply of all the sellers, it is evident how demand and supply equate, and determine the market price.

Thus it is seen that due to competition among buyers and also among sellers, and higgling and bargaining between buyers and sellers, a price is so adjusted that *the quantity demanded is equal to the quantity supplied*. This is called the equating of demand and supply or balancing of demand and supply.

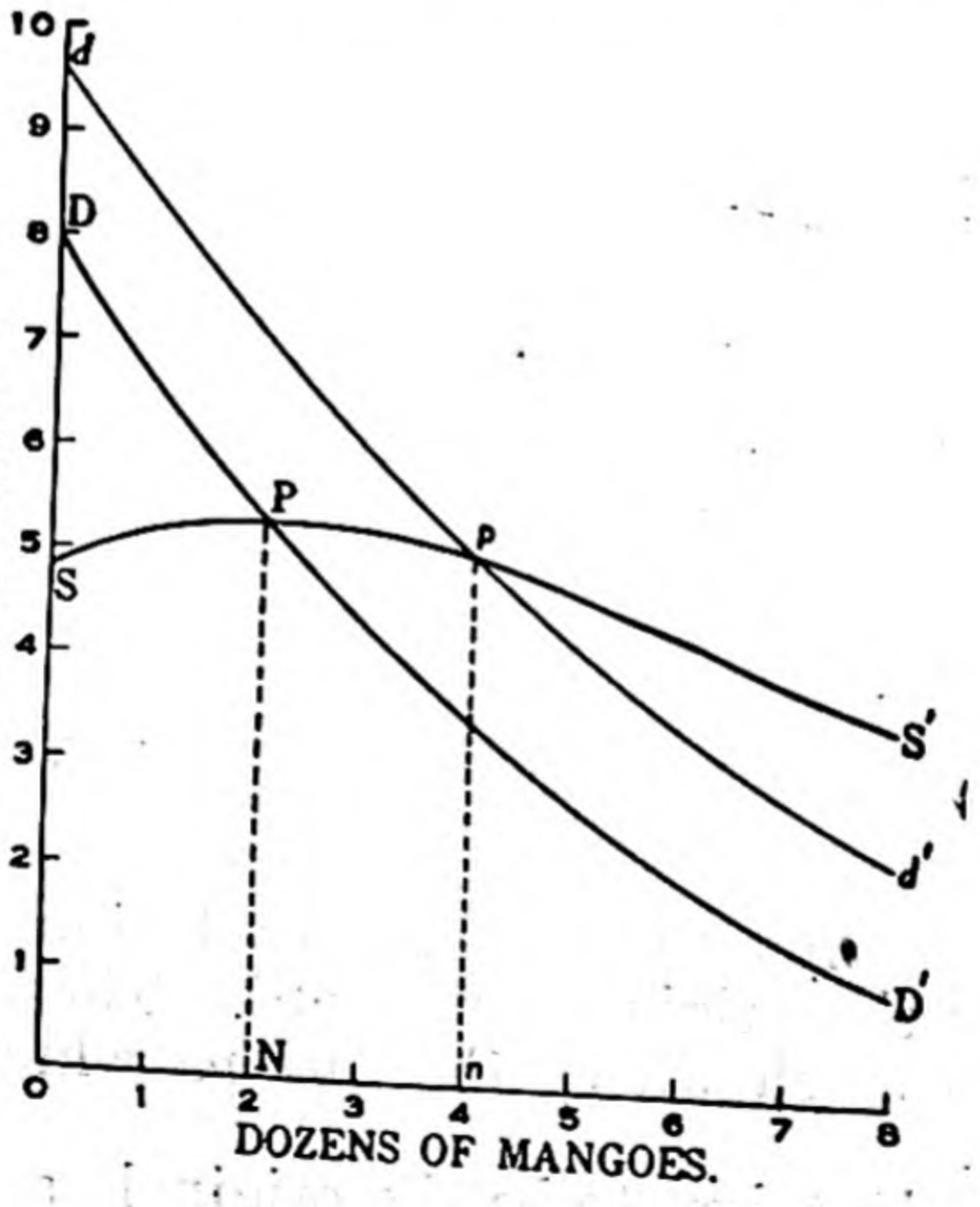
§ 8. **Price Curve.**—To represent this equilibrium between demand and supply graphically, the demand and supply curves should be drawn on the same axes. Quantities (demanded or supplied) are taken along the horizontal axis and prices along the vertical. In the diagram given below DD′ is the demand curve and SS′ the supply curve.



The two curves intersect at P which is called the point of equilibrium. It lies on the demand as well as the supply curve. PN is the equilibrium price and stands for $5\frac{1}{4}$ annas. At this price both the demand and supply stand at $38\frac{2}{3}$ dozens and are said to have equated.

§ 9. **Demand, Supply and Price.**—Changes in demand and supply due to changes in price have already been studied under the laws of demand and supply. A few cases are given here to show how market price is affected following a change in demand or supply of a commodity.

Case I. Suppose the supply of a commodity follows the law of Increasing Returns. The supply curve will be a descending curve like SS′.

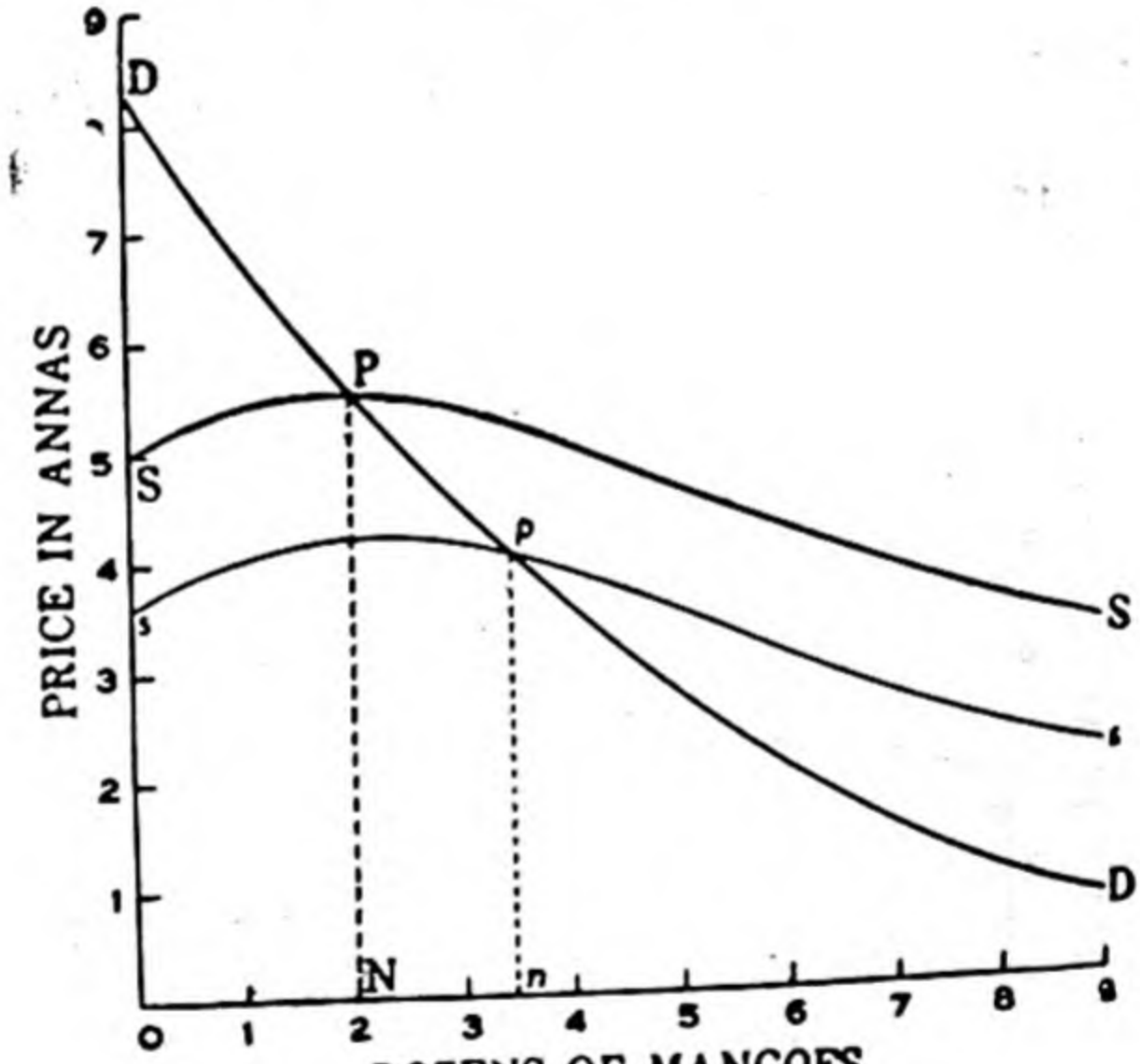


If the demand rises, the demand curve will rise from DD′ to dd', the new point of equilibrium will be at p and the new price will be represented by pn which

is lower than the original price PN. Here an increased demand and a constant supply result in a lower price.

To observe the influence of diminished demand on price, let dd' be the original demand curve and the new diminished demand be represented by the lower curve DD′. The point of equilibrium will change from p to P and the price from pn to PN. It is obvious that if the supply following the law of Increasing Returns remains constant and the demand falls, the price will ultimately rise.

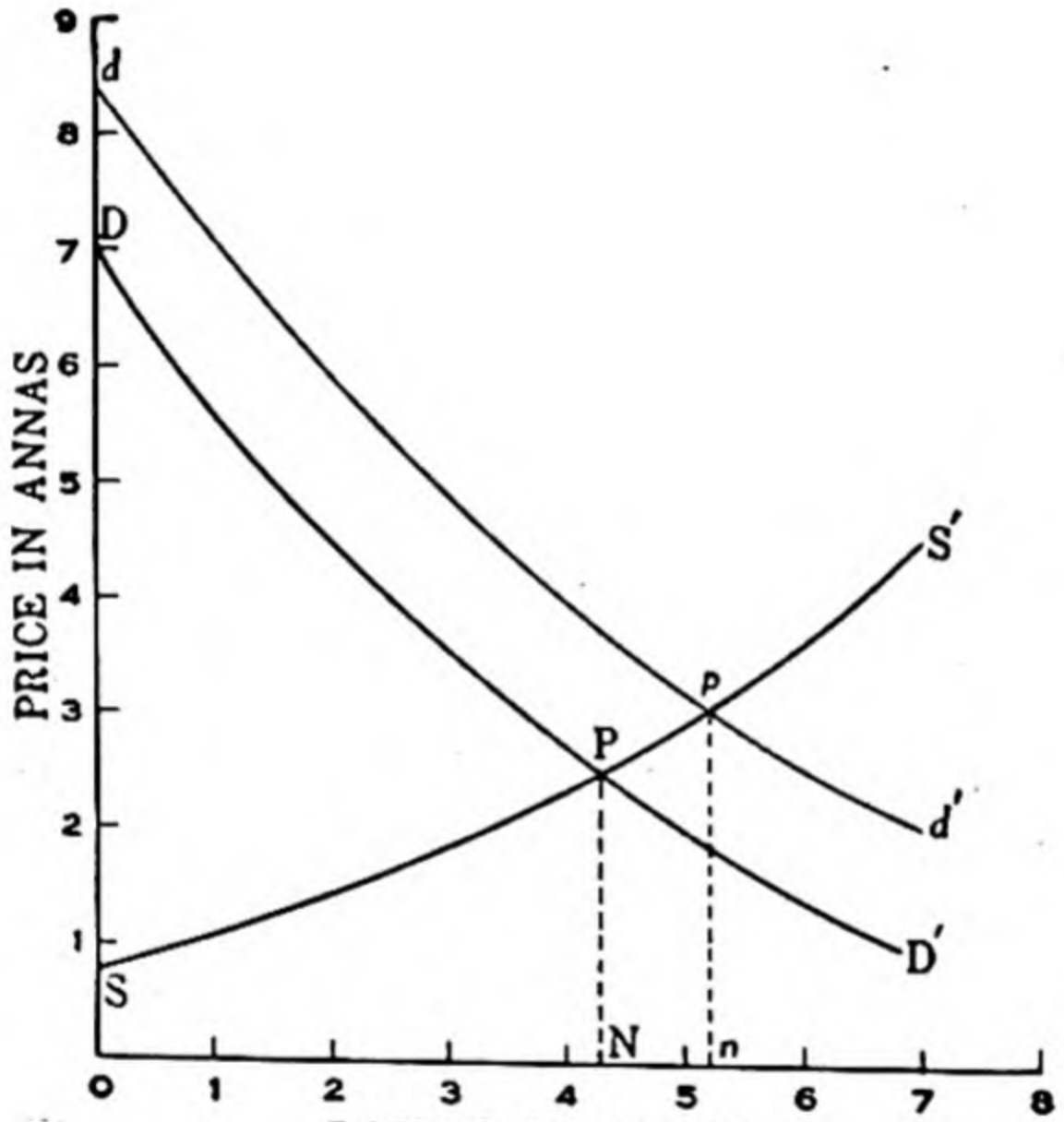
Case II. Now let demand remain constant and supply increase in this diagram.



The supply curve ss' showing the increased supply lies below the original curve SS′. The market price is lowered as shown by the line pn which is smaller than PN.

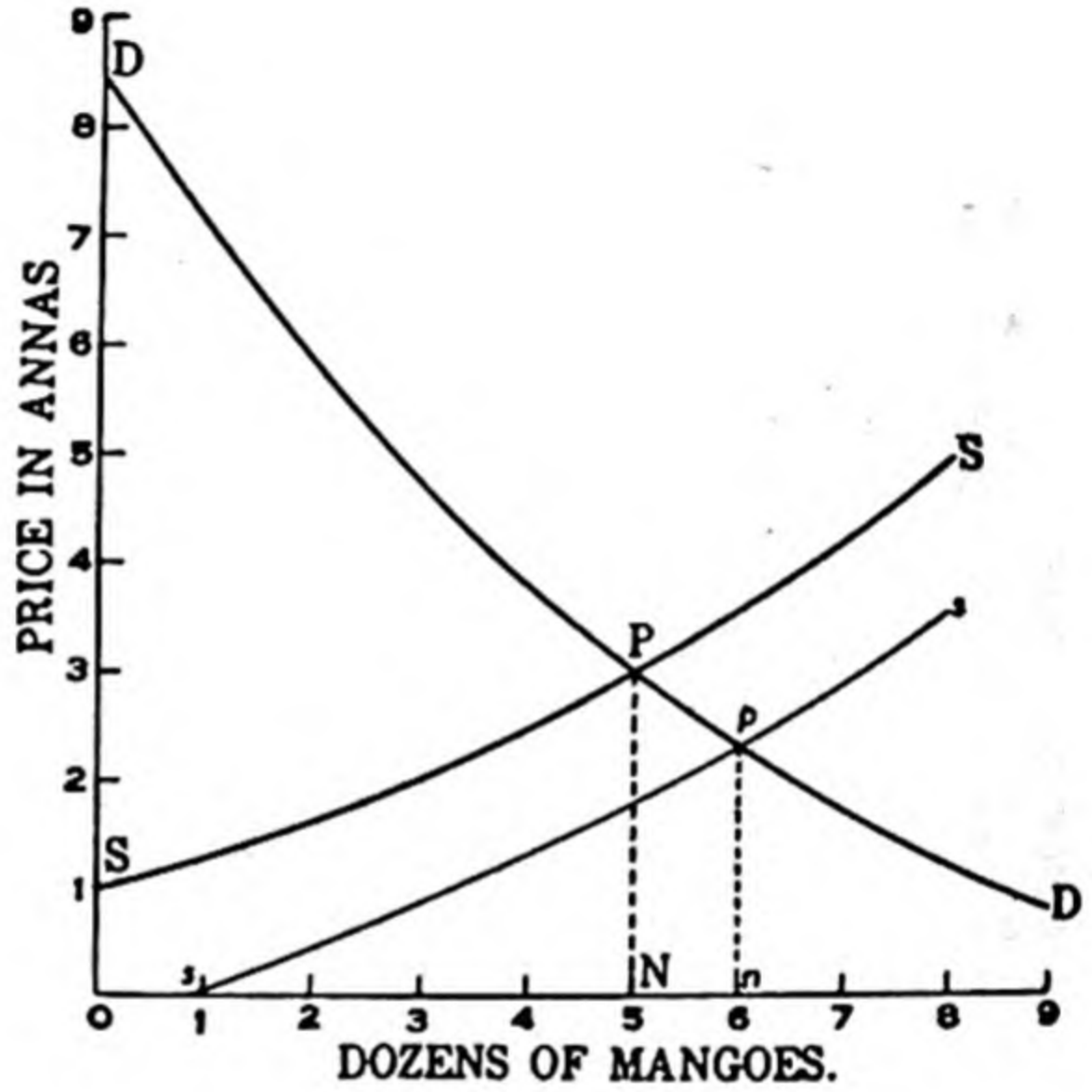
If ss′ be taken to be the original supply curve, SS′ will be the new supply curve, in which case the supply will be said to decrease and the market price to increase from pn to PN.

Case III. Let the supply follow the law of Diminishing Returns, (in this case the supply curve will be an ascending curve), and let the demand curve be the same as before.



Now, if the demand increases, market price will rise form PN to pn and if the demand decreases, the market price will fall from pn to PN.

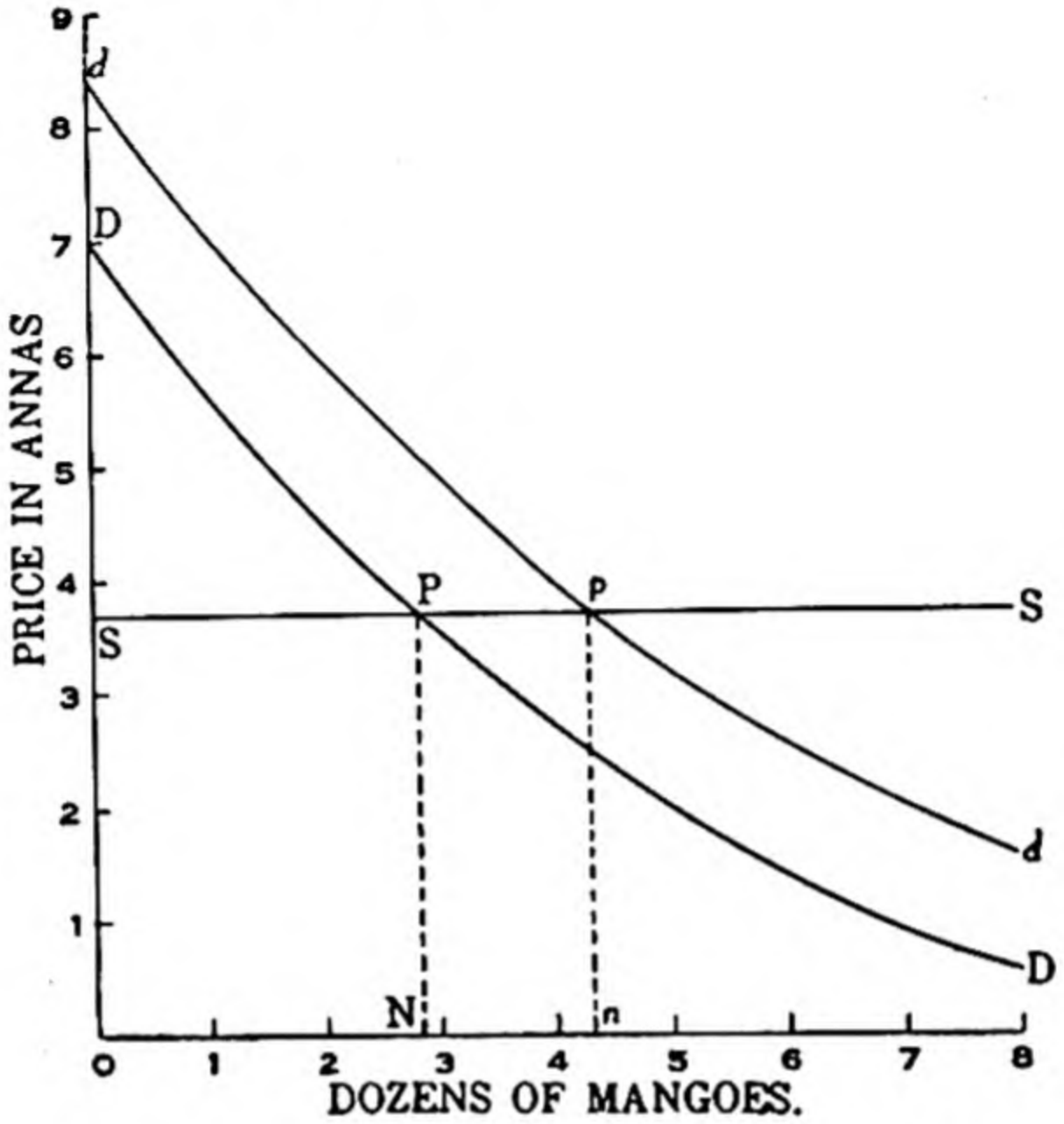
Case IV. In this case the demand is shown to be constant and supply to vary. If supply increases,



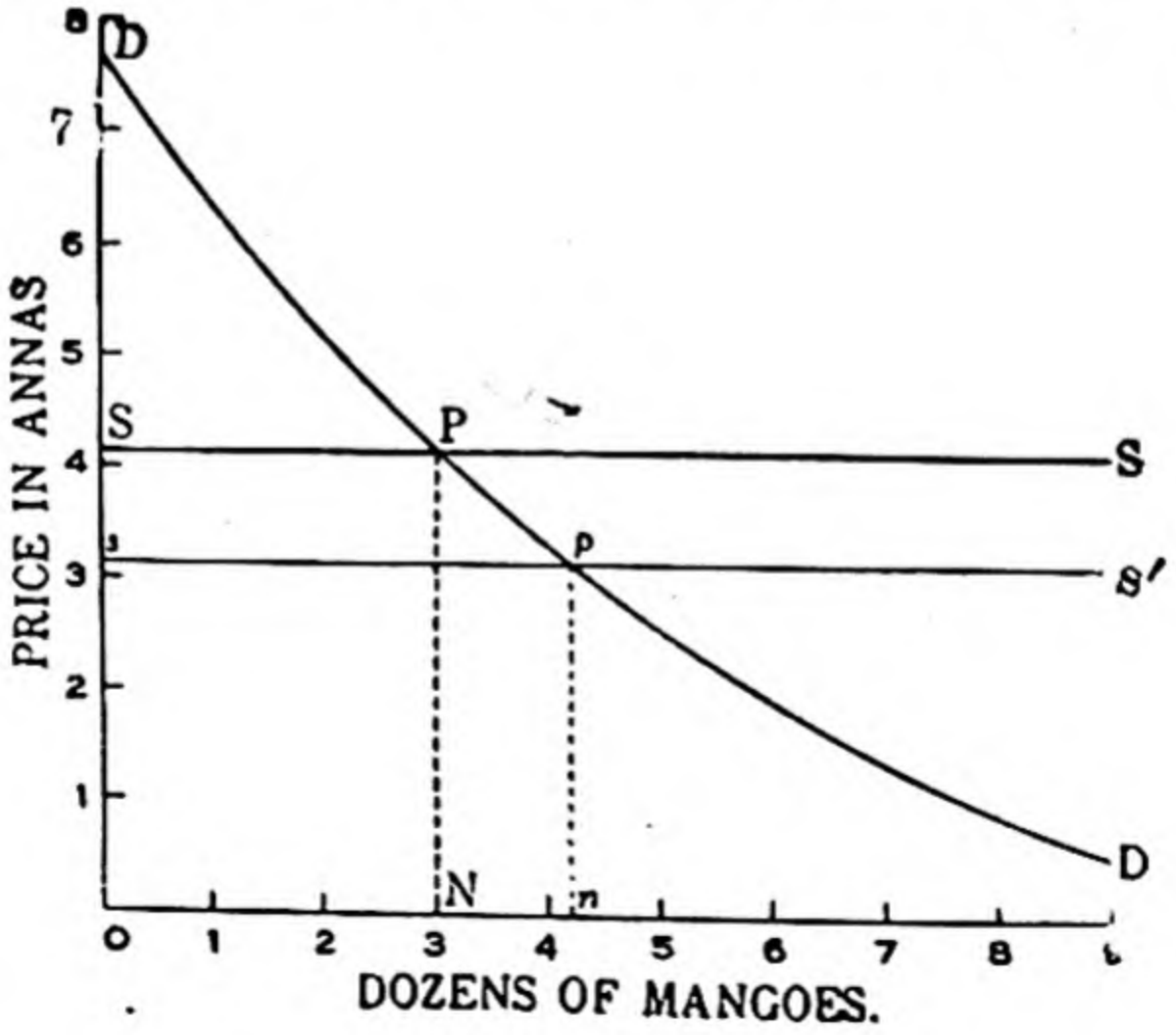
price will fall from PN to pn; if it decreases, price will rise from pn to PN.

Case V. Let the supply curve be a straight line running parallel to the base, as now it follows the Law of Constant Returns. In this case whether demand increases or decreases, the point of equili-

brium will lie on the line SS' and hence the price will remain unaltered.



se VI. Here the demand remains constant. upply falls from SS' to ss', the price falls



from PN to pn; and if the supply rises from ss' to SS', the price rises from pn to PN.

EXERCISES

1. What is meant by 'equilibrium between demand and supply?' Under what conditions do demand and supply balance?

2. Explain and illustrate how the market price of an article is fixed at a given time and place. Bring out clearly the relation of market price to the expenses of production.

3. How do you determine the buyer's maximum and the seller's minimum? Describe the factors that will alter these limits.

4. Show the interrelation between demand, supply and price.

5. "If price rises, demand diminishes, but if demand diminishes, price falls. It is difficult to see how price ever changes." Solve this difficulty.

6. Discuss the statement:

"We might as reasonably dispute whether it is the upper or the under blade of a pair of scissors that cuts a piece of paper, as whether value is governed by utility or cost of production."

7. By means of illustrative diagrams, show how market price will be affected by changes in supply alone under (*i*) Increasing; (*ii*) Diminishing; and (*iii*) Constant returns.

8. When both demand and supply change how can market price be (*i*) increased, (*ii*) decreased, and (*iii*) constant? Draw diagrams to illustrate your answer.

9. Prepare imaginary Demand and Supply Schedules for (*i*) sugarcane; (*ii*) Sugar, taking the producer to be the disposer. Then construct demand and supply curves separately for each of the two commodities and show how market price will be determined in each case.

CHAPTER IV

MARKETS

§ 1. **Market Defined.**—In economics, by market is meant not a place where commodities are exposed for sale like grain or vegetable markets, but the *entire region* where buyers and sellers are in such *free intercourse* that the price of a commodity *tends to equality* easily and quickly. The physical presence of a commodity is not necessary for a place to be included in its market; but what is essential is the presence of its buyers and sellers. If an inhabitant of Agra holding the shares of the Central Bank sells them through a broker of Calcutta to a person of Lucknow, both Agra and Lucknow will be included in the market for these shares.

The word '*tends*' in the expression 'price tends to equality' signifies that there is only a *tendency* for a commodity to be sold at the same price throughout the entire region. Of course, allowance has to be made for the cost of transport. The price of sugar at Gorakhpur and Benares *cannot* be the same. If, for example, the price of sugar at Gorakhpur is Rs. 9 a maund, and the cost of transport and other incidental charges incurred in bringing sugar to Benares amount to 4 annas a maund, the tendency for the price at Benares should be to be fixed at Rs. 9-4-0 a maund. If it is more than this, it is because there is a lack of free intercourse between buyers and sellers in the market.

§ 2. **Competition.**—Free intercourse or competition between buyers and sellers can exist only when we assume that buyers and sellers both have *perfect knowledge* of market conditions and enjoy

perfect freedom in their transactions. Perfect knowledge of market conditions implies that every buyer knows the prices being asked for a commodity by every seller, and that every seller knows the prices being offered by the buyers to different sellers. Perfect freedom in transactions means that a buyer has no difficulty in buying the article from whichever seller he chooses, and the seller has no difficulty in selling any portion of his stock to any buyer he likes. It means that there is two-sided competition—competition among buyers and competition among sellers, and higgling between buyers as a group and sellers as a group. If such perfect competitive conditions prevail in a market, price for any commodity must be the same throughout the market. If a difference in the price of a commodity is found, it is because competition among buyers and sellers is not full. In fact a complete and *perfect competition is hardly ever met with in a market* and as such the price of a commodity in the entire region is hardly ever equal.

§ 3. **Types of Markets.**—Markets are classified on the basis of *extent* or area and on the basis of *time*.

(*a*) *On the basis of extent.*—According to area, there are *local* or *narrow markets*, and *wide markets*. A narrow market is enjoyed by that commodity whose buyers and sellers are found to compete with one another over a *comparatively* small area. Typical examples may be cited of vegetables or sweets in a town. Common stones and bricks also possess narrow markets. Against these wide markets—*provincial, national or world-wide*—are enjoyed by certain commodities like wheat and gold which are bought and sold over wide areas.

(*b*) *On the basis of time.*—According to *time*, there are 'short period' markets and 'long period'

markets. These periods have again been divided into 'very short' and 'short' and 'long' and 'very long' periods. As will be explained later, this scheme of division of market is based upon the degree of success achieved by the supply of a commodity to adjust with its demand which has either risen or gone down in very short period. In the short-period market perfect equilibrium between demand for and supply of a commodity cannot be reached; while in the long-period market such a complete adjustment is possible. In the short period the supply of a commodity can be increased only by making a better use of the existing factors, or diminished by leaving them idle or unemployed, because there is insufficient time available to introduce a change in the scale or system of production. The result is an imperfect and unstable equilibrium. The long period is long enough to permit the necessary quantity of the factors of production to be employed or necessary changes in the system of production to be introduced and thus help the supply to be fully adjusted to demand, but the short period is too short to enable such an adjustment to materialize.

§ 4. **Extent of Market.**—In mediæval times markets were very narrow. Under domestic economy, commodities were produced on a small scale and sold in the towns and their neighbourhood. Fairs were held from time to time and they afforded the facilities for exchange of goods but people from great distances seldom visited them as there were no railways and no good roads. Transport of men and commodities was very slow, expensive and risky in the absence of a strong central government. It has been a slow growth of old town and village markets into world-wide markets of to-day and the development has been possible becasue of *two sets of very important causes*.

(a) Improvement in the General Economic Conditions

(i) Improvement of *roads* followed by the invention of *railways* and *steamships* has lessened distance enormously, and goods can now easily be sent to distant places much more quickly. To these is now added the *air* transport with great possibilities as a means of quickest transport of specially perishable goods.

(*ii*) The facilities for easy and cheap communication by *post*, *telegraph*, *telephone* and *wireless* have brought the purchasers and sellers of distant lands in close and constant touch with one another.

(*iii*) Then the *printing press* and the *radios* scatter information of goods and prices broadcast and have done much to create conditions that tend to establish more or less complete knowledge of the markets.

(*iv*) And again, the establishment of *banking* institutions with their branches established throughout the world has helped in the movement of money in payment of goods, an important service indeed for without it the purchase and sale of goods cannot be complete.

These facilities, essential for the extension of market, are meant for the benefit of all commodities alike, yet they cannot equally well be enjoyed by all of them. For a commodity to command a wide market it much possess certain qualities besides being assisted by the facilities of transport, communication and banking services.

(b) Qualities of a Commodity.

(*i*) It should, for instance, be in *general demand*. Unless a commodity is of common use it cannot find

puchasers over a wide area. Such commodities are gold, silver, wheat, cotton and investment securities which are bought and sold almost everywhere. Of course, to meet a wide demand, supply of the commodity should also be adequate.

(ii) It should be *cognizable*. If a commodity can be easily and exactly described it can be bought and sold even when the buyers, sellers and the commodity are not found together. Its suitability for *grading* and *sampling* will make its sale and purchase possible by post or telegraph. Wheat and cotton have been sampled and graded very finely and there is no difficulty for a prospective purchaser to understand the quality of such a commodity he is about to buy according to the grades.

(*iii*) To enjoy a wide market, a commodity should be *portable*, *i.e.*, it should be easily packed and unpacked, occupy a small space and possess *high value* in *small bulk*. Heavy and bulky goods are charged higher freights by transport agencies and they, therefore, become costly at their destination and lose in demand. The price becomes prohibitive if they are transported over long distances. Then the goods of high value bear low transport charges per unit of money cost. A bale of cotton piece-goods weighing a maund has, for example, value worth Rs. 100/-, while silk goods of the same weight are worth Rs. 1,000/-. If they are charged equal freight, say, Re. 1/- over 50 miles, cotton will bear approximately 2 pies per rupee as its cost of transport while silk about one-fifth of a pie. Silk has, therefore, greater possibilities of wider market than cotton.

(*iv*) Again, the commodity should be *durable* so as to stand transport well. Fresh fruits and vegetables, meat and eggs cannot stand long storage in ships and trains while being transported, and conse-

quently cannot have wide market. As a matter of fact, before the advent of scientific packing, icehold and refrigerating vans the market for perishable goods was a very narrow one. Only the above-mentioned improvements allied with quick and through transit have helped them to enjoy wide markets. Nowadays, every important town in Northern India is being supplied with highly perishable goods like green vegetables from Calcutta, fish from Karachi and grapes from Kabul.

§ 5. **Periodic Markets.**—On the basis of time there are periodic markets usually of four types—Very Short Period market, Short Period market, Long Period market and Very Long Period market. These periodic markets are determined by the degree of equilibrium which the supply of a commodity is able to reach with its demand. While arguing about the balancing of demand and supply, it is customary to start with changes in demand for a commodity and thereafter study how supply reacts in response to those changes in demand. For example, if the demand for a commodity has gone up, the producers will try to increase supply to balance this higher demand; and if the demand has gone down, the supply of the commodity will be reduced accordingly. Now this reaction of the supply to changes in demand will take some time to materialize; it will proceed gradually till the necessary adjustments in the factors of production, its processes and scale, etc., are made.

If no time is allowed for these adjustments and we study the condition of price in the market with raised or reduced demand, and unchanging supply, we have an imperfect equilibrium and a very short period market. If full time has been allowed for every step necessary in the adjustment of supply to demand, and perfect equilibrium is thus reached

between demand and supply, we have very long period market. In between these two positions of imperfect and perfect equilibrium there are two more stages of short period when equilibrium is slightly better than that of very short period, and of long period when equilibrium is almost perfect. It is obvious, therefore, that the distinction of periodic markets depends upon the degree of equilibrium reached between the demand and supply and the steps which could be taken to bring about this degree of equilibrium.

Market Price and Normal Price

Market Price.—Market price is the price of a commodity ruling in a market at a particular time. Its characteristics are the following:—

(*i*) *[illegible]lity* or *changeability* is the chief characteristic of market price. On a particular day no stability in the equilibrium between demand and supply is possible and these factors continue changing. As a result of the changes in demand and supply the price of the commodity keeps on changing. It may change from day to day or even several times in course of a single day.

(*ii*) Market price may be *much above* or *much below the cost* of production. Perfect equilibrium between demand and supply can be reached only over a long time when the elements constituting demand and the items of supply, or cost of production, have had sufficient time for full adjustment. But on a particular day or a particular hour of a day the adjustment between demand and supply is likely to be very unsteady and imperfect. Either the demand may be far in excess of supply and in that case the price may be much above the cost; or the demand may fall short of supply and the price may be much below the cost.

(*iii*) Market price is *essentially a very short-period phenomenon* and the high or low market price will not be permitted to reign in the market over a long period. The high market price will prove highly profitable to the producers who will feel induced to increase their supply which will in its turn bring down the price. Similarly, the low market price will be a source of loss to the producers, who will reduce their supply and thus the price will be raised.

(*iv*) The market price *tends to be equal to normal price* in the long run; that is, though the price may be much above or much below the cost of production at a particular time, it tends to be equal to normal price or cost of production over a long period.

Normal Price.—Normal price is the price of a commodity established as a result of perfect equilibrium between demand and supply over a long period. It has the following characteristics:—

(*i*) *Stability* is the chief feature of normal price. Once a perfect equilibrium between demand and supply has been reached over a long period, it is not easily disturbed. And even if changes do take place, they are slight. Therefore the fluctuations in the normal price of a commodity are slight, like small ripples on the smooth surface of a lake, which remains more or less constant.

(*ii*) Normal price is *equal to the cost of production* of the commodity as it is the result of perfect balance between demand and supply. Given sufficiently long time for alterations in demand (changes in taste, fashions, means and standard of living) and supply (improvements in production, change in scale and others) there are little chances of any further serious changes to upset this perfect balance. Competition has had full play and margin of profit and loss totally removed. Such conditions are

bound to equalise normal price to the cost of production.

(*iii*) Normal price is *essentially a long-period price*. The type of perfect equilibrium noted above, brought about after all adjustments in demand and supply have been made and full competitive conditions have been established, is possible only if sufficiently long time has been allowed for the above forces to act and react upon each other. Such a perfect equilibrium is rarely reached in short period, and even if reached, it is soon upset.

(*iv*) Normal price is the *price to which market price tends to be equal*. Fluctuations in the price of a commodity occur from time to time due to changes in demand and supply in the process of their mutual adjustment. These interactions of demand and supply grow weaker and weaker as more and more time is allowed for their adjustment and, ultimately, a balance is reached in the long period and normal price is established.

• **How Market Price Tends to Equate With Normal Price?**—The tendency of the market price to equate with normal price materialises gradually through certain stages. We call these stages as '*periods*.' Though at times four such stages can be marked, here we shall attempt to study the process in three periods—*very short*, *short* and *long*. The point specially to be noted is how the excessive or deficient supply of a commodity in a very short period is reduced or increased so as to perfectly balance with demand in the long period.

§ 6. **Very Short-Period Price.**—The chief feature of a very short period is that the supply of the commodity is fixed, that is, equal to its stock existing in the market. It can neither be increased as there is insufficient time to bring in fresh supplies from neighbouring places, nor can the supply be

reduced as the commodity is highly perishable and cannot be stored for fear of deterioration. Perishable articles like ice, fish and green vegetables provide excellent examples, market prices of these goods may change quite a few times from morning till night. A hot day will suddenly increase the demand for ice and supply being at its daily level price will rise. A cool breeze in the evening may on the other hand greatly reduce the demand and the price will fall. Similarly, unusually heavy influx of fish or watermelons into the market will lead to a heavy fall in its price as, the commodity being highly perishable, it cannot be stored for the next day.

Thus the price in very short period seems to be entirely regulated by the demand. If demand is great, price is high; if demand is low, price is low. But it should be noted that just as one blade of a pair of scissors cannot by itself cut a piece of paper, similarly demand alone cannot determine the price. Because the supply of a commodity is fixed in a very short period, it should not be supposed to be absent or inoperative. Really speaking it plays only a minor part while demand plays a prominent part in the determination of price. The *very short-period price*, therefore, can be highly profitable or highly unprofitable, or according to high or low demand it *may be much above or much below the cost of production.*

§ 7. **Short-Period Price.**—In the very short period the supply was fixed and no time was allowed to supply to increase or diminish in response to a high or a low demand. But short period being of a longer duration than very short period, supply can adjust to demand up to a certain degree. If the demand in very short period has been high, and the supply low, this low supply can be increased (*i*) by utilizing the existing resources of the industry more and more or (*ii*) by getting additional quantity of

the commodity from neighbouring places. The labourers employed will work overtime or double shifts, a more rigid economy will be made in the use of raw material and old and obsolete tools and instruments will be repaired and pressed into use once again. Thus the supply will be augmented but it will not increase sufficiently to bring about perfect equilibrium with demand, but will result only in a partial equilibrium.

If the demand in very short period has been low and supply in excess of it, the supply will be reduced in short period (*i*) by rendering idle some of the factors employed in the industry or (*ii*) by sending away part of the supply to neighbouring places. Some labourers will be retrenched, the hours of work reduced, and broken and worn-out capital goods will not be replaced. Thus the excessive supply of the very short period will be reduced and the result will be a greater approach to perfect equilibrium with demand. As a consequence, the short-period price, though it is not a perfect equilibrium price, is more stable than the very short-period price and is neither as much above nor as much below the cost of production.

For instance, an unsually hot weather may suddenly raise the demand for watermelons and also the very short-period price of melons, and if the heat persists the demand for melons may continue high and so also the price. The sellers would do their utmost to increase the supply and take advantage of so favourable prices. Though it will be too late to sow new fields, they will try to enhance the supply by better irrigation of the crop in the existing fields from the existing wells, and by keeping a stricter watch over their fields. They will also augment the supply by bringing in a small extra quantity from neighbouring places as huge quantities from distant

places will prove expensive in the case of such a bulky commodity. Thus supply can be somewhat increased and as a result the very high price of the very short period will be lowered to some extent, and brought nearer to the cost of production. In case of a falling demand, the high supply of very short period will be reduced by steps opposite to those given here.

§ **8. Long-Period Price.**—The long-period price is the result of an almost perfect equilibrium between demand and supply. Supply during long period has time to be increased by (*i*) increasing the scale of production of the industry, (*ii*) introducing an improvement in the method of production, and (*iii*) by mobility of labour and capital to the industry in question from other industries. Similarly the supply can be reduced by (*i*) reducing the scale of production, (*ii*) postponing the adoption of any improvement and (*iii*) sending away labour and capital from this industry to another industry which is more paying. The price is, therefore, stable and almost equal to the cost of production. It may actually reach the cost of production-level and then it will be called *Normal Price*.

To continue the instance of melon business, suppose this season has been a prosperous one, and counting on such favourable conditions to prevail next year, the producers will hire more fields, dig more wells and make other necessary arrangements to ensure a greater supply next season. Even gardeners and vegetable growers may give up their less profitable jobs and take to melon business. This increased supply due to larger scale of the business undertaken by old producers and the mobility of the labour and capital from other businesses, will equate with the high demand more fully next season than was the case this season. The equilibrium between demand

and supply will be more perfect than has been possible in the short period. One year is thus sufficiently long time during which all necessary alterations can be made in the factors of production to increase the supply of melons fully to meet the demand and, therefore, it will be regarded as a *long period for melons*; and the price fixed in these circumstances will be called their *long-period price*.

Short and Long Periods.—Short as well as long periods have no definite duration apart from the question of supply of a commodity, but are relative to it. If in a period only the existing factors of production can be adjusted to meet the demand, and no permanent change in the scale or method of production is possible, that period should be regarded as the short period for *that* commodity. The period will vary with different commodities: it will be really short, say two months, for green vegetables; not so short for wheat, in which case it may be one year; and may be a couple of years for sugar or cotton piece-goods.

§ 9. **Long Period Price and Normal Price.**—Due to a better adjustment between the new supply and the higher or lower demand of the short period, the long-period price will neither be highly profitable nor highly unprofitable. It will be much nearer the cost of production than is possible in the short period. If the demand has been low in short period, the diminished supply of the long period will raise the price. Again, if the price has been high in the short period, the supply will be increased in the long period and the price will be lowered. In either case the price will neither be appreciably higher nor lower than the cost of production.

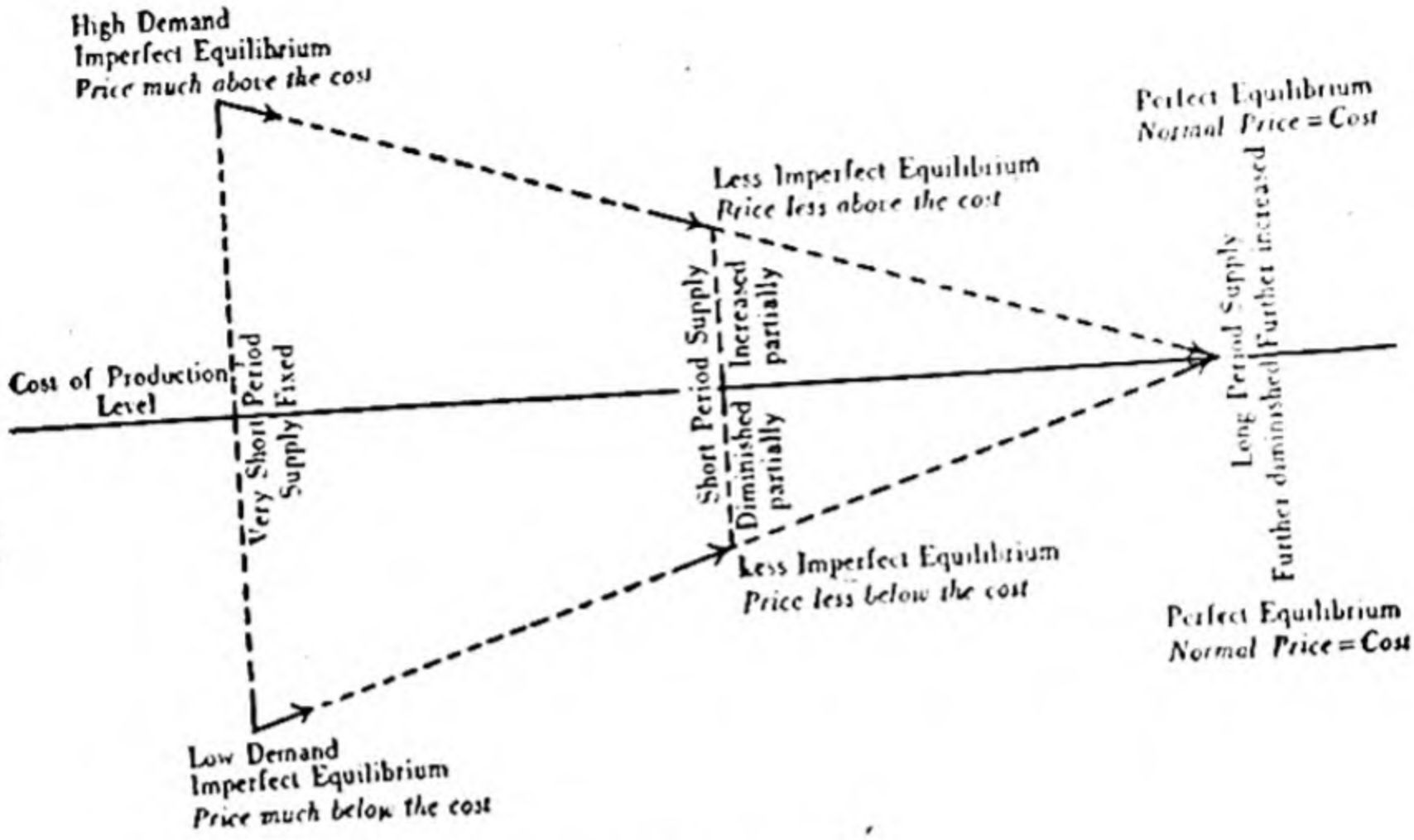
Normal price is the cost of production-level. It can be reached only if in the long period the supply has been accurately increased or diminished to arrive at a

perfect equilibrium with the demand. The supply should be just enough, no more and no less than the demand. Such conditions are difficult to be fulfilled as the supply in the long period may be a little in excess or short of demand, or the demand itself might change in the mean time while supply is being planned to meet old demand, due to change in taste, fashion and means of the consumers.

But the perfect equilibrium between demand and supply or the attainment of normal price is not impossible. When in short period the demand for a commodity is high and the supply low, it will be increased in the long run and during its course of rising it may just reach the point of complete equilibrium with demand and we may have the normal price at this level. If it were possible to arrest the supply at this level and the demand also remains stationary, the normal price will be maintained for some time. But if the supply continues rising due to imperfect adjustment even after the point of equilibrium has been reached, or the demand changes for one reason or the other, the demand changes for one reason or the other, the normal price or perfect equilibrium will be disturbed.

Similarly, if the supply is in excess of the demand in the short period, and is being reduced to equate with the demand in the long period, in its course of going down it may equate fully with the demand and normal price will be established. Whether it will be a temporary equilibrium or will last for some time, depends upon whether the demand and supply factors are controlled at this level.

The following diagram shows how the very short-period price gradually approaches the cost of production-level in the long period :



EXERCISES

1. Define 'market.' Distinguish between a local market and a world market. Give illustrations of five commodities having a local market and five others that have a world market.

2. What causes bring about an extension of markets and with what results? Give examples.

3. Describe the marketing of one of the principal crops in your district by the ryot. Why does he not succeed in securing good price for his produce?

4. Distinguish between market price and normal price. Under what conditions are the expenses of production a dominant factor in the determination of price and why?

5. "The value of a commodity cannot be permanently much above or below its cost of production." Explain.

6. Analyse:—"Marginal utility determines the price in the short period while the cost of production does it in the long period."

7. What is competition? How does it influence the determination of price in the market?

CHAPTER V

TRANSPORT IN INDIA

1. Transport

§ 1. **Importance of Transport.**—*Economic Consequences.*—The quick and adequate means of transport play a very important part in the economic development of a country. (*i*) As a matter of fact no productive process is complete until the means of transport bring the produced commodity to the consumers. (*ii*) Mobility of labour and capital is brought about and their efficiency increased. (*iii*) Division of labour and localization of industries are their direct result, and their future progress depends on the development of the means of transport. (*iv*) Efficient transport means lower cost of transport and this in its turn extends the market for the commodities to the benefit of both the producers and consumers—producers effecting greater sales while consumers purchasing the articles at lower prices. The cotton industry of Bombay, the Jute industry of Calcutta, the Iron and Steel industry of South Bihar would not have expanded to the present degree had it not been possible for labour and capital to be mobilized and concentrated in these areas and for the finished commodities to be quickly and cheaply distributed over the whole country and even exported to foreign lands. (*v*) The economic self-sufficiency of the Indian villages has broken down and they no longer produce locally all that they want as the articles manufactured in the towns and cities of this country and abroad reach them quickly and cheaply. (*vi*) The villagers have at the same time succeeded in improving the art of

cultivation and substituting commercial crops for food crops and are earning more money incomes. (vii) The nature of the famines has changed. People in famine-stricken areas no longer starve as food grains, clothes and other articles can be conveyed to them from places where there is no scarcity.

Social Consequences.—The means of transport have reduced the conservatism and widened the outlook of the villagers by encouraging travel and pilgrimage and bringing them in close and frequent contact with different people. (*ii*) They have also created the consciousness of unity and nationhood among the inhabitants of different provinces. (*iii*) For the purposes of national defence they provide excellent channels for the mobilization of armies to any part of the country at a short notice.

2. Means of Transport

The means of transport available in India are Roads, Railways, Waterways, and Airways.

§ 2. **Road Transport.**—The entire road system of the country is linked with the framework formed by the four great trunk roads, namely, (*i*) the Grand Trunk Road, the most famous of them all—stretching right across the country from Calcutta to Khyber, and three others connecting Calcutta with Madras, Madras with Bombay and Bombay with Delhi. These trunk roads account for about 5,000 out of the 85792 miles of *metalled roads* in India. Besides the surfaced roads there is a large mileage of lower types of roads approximating to 261000 miles, some of which are suitable for motor traffic during dry weather. These figures do not include the roads lying within the limits of municipalities.

Leaving apart 6,811 miles of central area roads, the rest may be divided on administrative side into two main classes, Provincial Roads under the Public

Works Department and Local roads in charge of local bodies. Up to 1929 these roads were being financed exclusively from provincial and local revenue. But since the inception of the Road Fund formed from the proceeds of the duty on petrol, levied at the rate of $2\frac{1}{2}$ annas per gallon in 1931, the provinces have been receiving grants from the Central Government for the construction, reconstruction or improvement of roads but not for ordinary road upkeep.

Indian roads are inadequate.—The internal trade of India is at least 15 times as valuable as her external trade yet roads, that can contribute more effectively in its development, have been neglected for the sake of the railways. The present total road mileage of 275000 for British India is too *inadequate*, considering its area over 1 million square miles and population over 295 millions. Of this mileage only 86000 miles are metalled or water bound macadam roads while the remainder are of lower types. If India were supplied with roads on the same scale as Great Britain, she will require 3 million miles of roadways of which the present mileage comes to a meagre 8.8 per cent.

The roads of the country are deteriorating.—To make things worse, the existing roads are *deteriorating* due to lack of proper repairs by local boards. In rural areas there are hundreds of villages which cannot at all be reached during the rainy season as the connecting roads become veritable drains while the 'nallas' in the neighbourhood are left unbridged. Moreover, there are several parts of the country that are inaccessible at present but rich in resources, yet they cannot be developed in the absence of suitable transport. Of course, the means of transport pay if they serve economically rich areas; but they are necessary for the development of backward regions too.

To remove the isolation of villages and the inaccessibility of many areas, extensive road construc-

tion programme should be adopted on lines somewhat different from those already followed. The utility of present trunk roads for commercial purposes is lessened as they run parallel to the railways. This duplication of services has resulted in unjustifiable waste of capital; at the same time it has raised serious problems of Rail-Road competition which is costing the railways about Rs.2 crores annually. India needs new roads running at right angles to the railways and feeder roads branching off these trunk roads to connect the interior with the railways and through them with profitable market for the raw materials. India can afford to forego further railway extension and devote her finances to road building in order that her more valuable internal trade be fed and developed, forest resources be tapped, and the agricultural and cottage industry products be profitably marketed to bring about greater prosperity to the country.

In rural areas the bullock carts are the chief vehicles for the transport of goods and passengers and they will retain their supremacy for a long time to come. Buses and lorries have made their appearance yet the country roads are unsuited to them and their number is also small. In 1940 India possessed only 174078 motor cars averaging at one car for 2000 persons as compared to one for 20 in the United Kingdom and one for 5 in the United States of America. The import of foreign cars in India has gone down lately and in 1938-39 amounted to 11,058 cars worth Rs.217 lakhs while in 1942-3 it practically came to a standstill and numbered only 371 cars valued at Rs.11.4 lakhs. This decline is undoubtedly the result of war conditions. Her road traffic can be quickly and economically developed only if she succeeds in establishing her own motor car industry for which attempts are being made now-a-days by Mysore State, Birlas and Tatas.

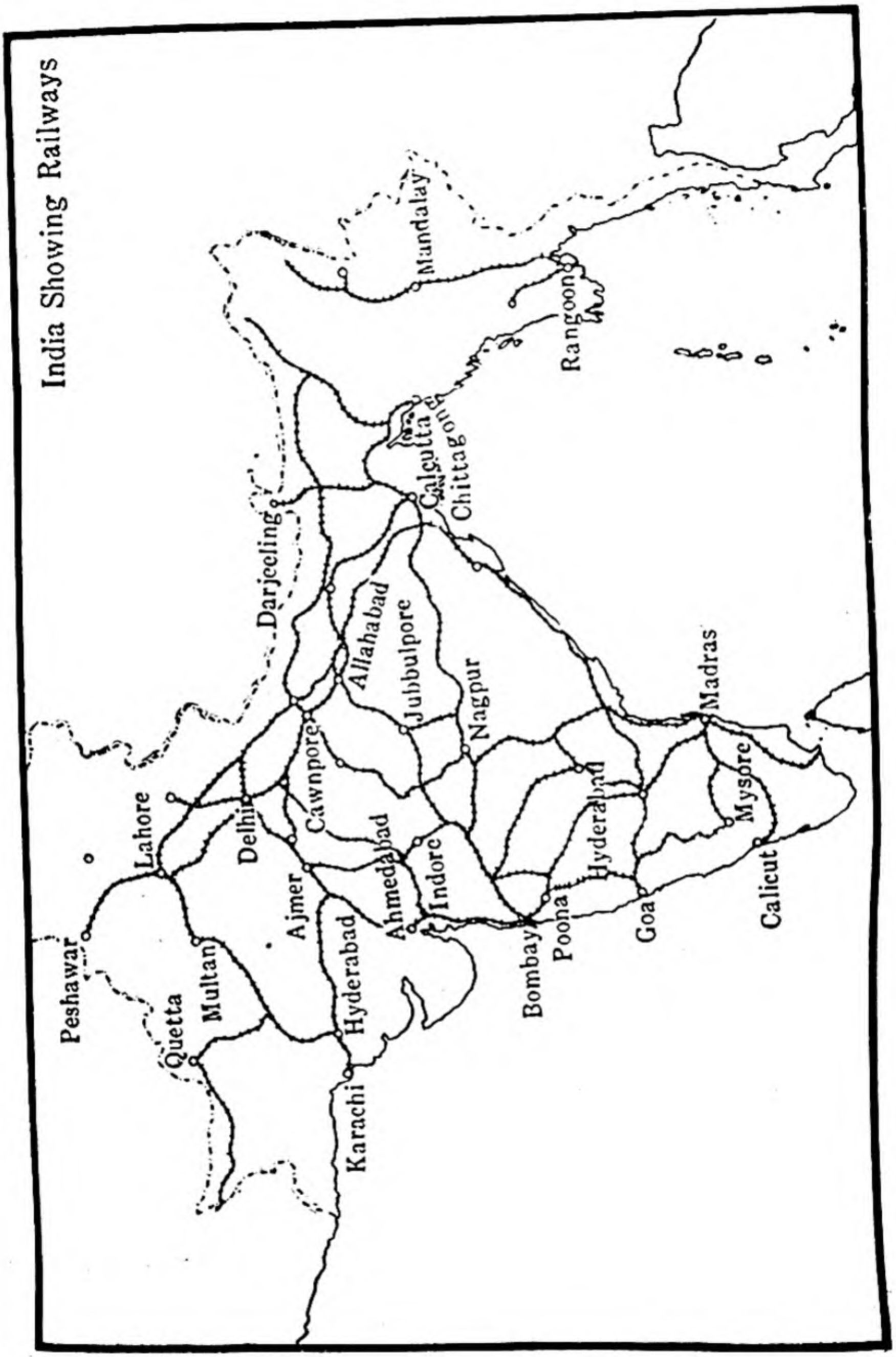
§ 3. **Railways.**—Growing from modest beginnings in 1845 when Calcutta-Raniganj, Bombay-Kalyan and Madras-Arkonam sections were sanctioned as experimental measures, the railway mileage on 31st March 1943 was 40524 miles representing the capital investment of Rs.880 crores.

The main railway systems with their mileage are given below :—

		1939	1943
1	Bengal-Assam	1306 miles	3457 miles
2.	Bengal North-Western	2117 „	2093 „
3.	Bengal Nagpur	3392 „	3378 „
4.	Bombay Baroda and Central India	3509 „	3370 „
5.	Eastern Bengal	2008 „	Amalgamated with B. A. Ry.
6.	East Indian	4390 „	4079 „
7.	Great Indian Peninsula	3727 „	3584 „
8.	Madras & South Mahratta	2966 „	2939 „
9.	North-Western	6931 „	6885 „
10	South Indian	2531 ,	2348 „

The railways in India were constructed, and managed by private companies of Great Britain till 1925 when the Government of India began to exercise its right and purchase them from their Companies. At present 30,5000 miles of railways comprising East Indian (including Oudh and Rohilkhand), oudh & Trihut Railway (comprising Bengal North western and oudh Rohilkhand Railway), Great Indian Peninsular, North Western, Bombay Baroda and Central India, Madras and South Mahratta, and Bengal-Assam-systems are owned by the State. Of these the first four systems with 20600 mileage are directly managed by the Railway Board while the remaining three systems are managed by private companies though their policy and ultimate control rests with the Governor-General-in-Council.

India Showing Railways



Defects of Railway System.—Railway construction in its earlier stages was guided by military policy of facilitating troop movements and paid little regard to the commercial development of the country. At the same time the railway rate policy was aiming at encouraging her external trade at the cost of internal trade. Recently military objective has grown weaker so also there is a change in the rate policy, yet even now the freight on goods carried between the ports and inland towns at a longer distance is lower than between two inland towns situated at a lesser distance. With regard to passenger traffic, most of the improvements and facilities seem to be introduced for the benefit of the higher class passengers while the comforts of the third class traffic that contributes 92% of passenger fare are somewhat neglected. Their working expenses too are rather high and incapable of reduction in lean years, the depression during 1933—39 being responsible for a loss of over Rs. 63 crores to the state railways. Again, the development of motor transport has proved a source of loss to them and railways will have to devise some means to overcome this competition without checking the progress of motor transport that is so full of possibilities for the growth of internal trade. But it must be admitted that in addition to having brought about India's cultural and political unity, the railways have considerably expanded her inter provincial and international trade and are capable of rendering still greater and more valuable services to her economic progress and prosperity.

War and Railways.

The war has proved beneficial to the Railways in several ways. Rationing of petrol reduced competition from Road transport and therefore the railway

monopoly over the transport of goods and passengers in the country was absolute. Military traffic was a profitable source of earning and so also increased civil transport of foodgrains, cotton and jute manufactures, kerosene oil, salt and others. In spite of reduction in the train services, passenger accommodation, and restrictions on travel, a record passenger traffic was seen. All these combined to change railways from a source of loss to that of huge profits. Past deficits were wiped out, big reserve funds accumulated and General Revenues of the central government received handsome contributions which in the year 1944-45 alone amounted to Rs. 45 crores. As a result of this prosperity the Government propose to build 2800 miles of fresh railway lines as a part of its short term construction programme.

§ 4. **Waterways.**—Waterways are classed into two groups, sea routes and internal waterways like the rivers and canals.

Marine Transport.—As for the sea-transport—both oceanic and coastal, it is a monopoly of foreigners and dominated by non-Indian interests. The Indian shipping is carrying a negligible percentage of 1·5 of the oceanic trade of the annual value of Rs.450 crores and 15 per cent of the coastal trade of over 10 million tons valued at Rs.178 crores. In the Central Legislature, private members introduced bills for the reservation of India's coastal traffic to Indian shipping, but the Government of India has not seen its way to accept it though out of 32 mercantile countries of the world as many as 27 have reserved their coastal traffic to national shipping, while the countries like Great Britain herself had at one time or the other taken recourse to such a reservation before they grew up to own huge mercantile marines. The result is that foreign shipping companies with their enormous resources have already killed by serious competi-

tion 23 out of 32 Indian companies that were floated to work along the coasts. Thus India owns hardly 1½ lakh tons out of the total world tonnage of 62 millions. Even small countries like Finland, Yugoslavia and Panama own more tonnage than India, while Britain contributes 79 times as large tonnage with only 5½ times India's contribution to the world trade. India is consequently losing over Rs.57 crores annually in payment for shipping services rendered by foreign vessels to her sea-borne trade.

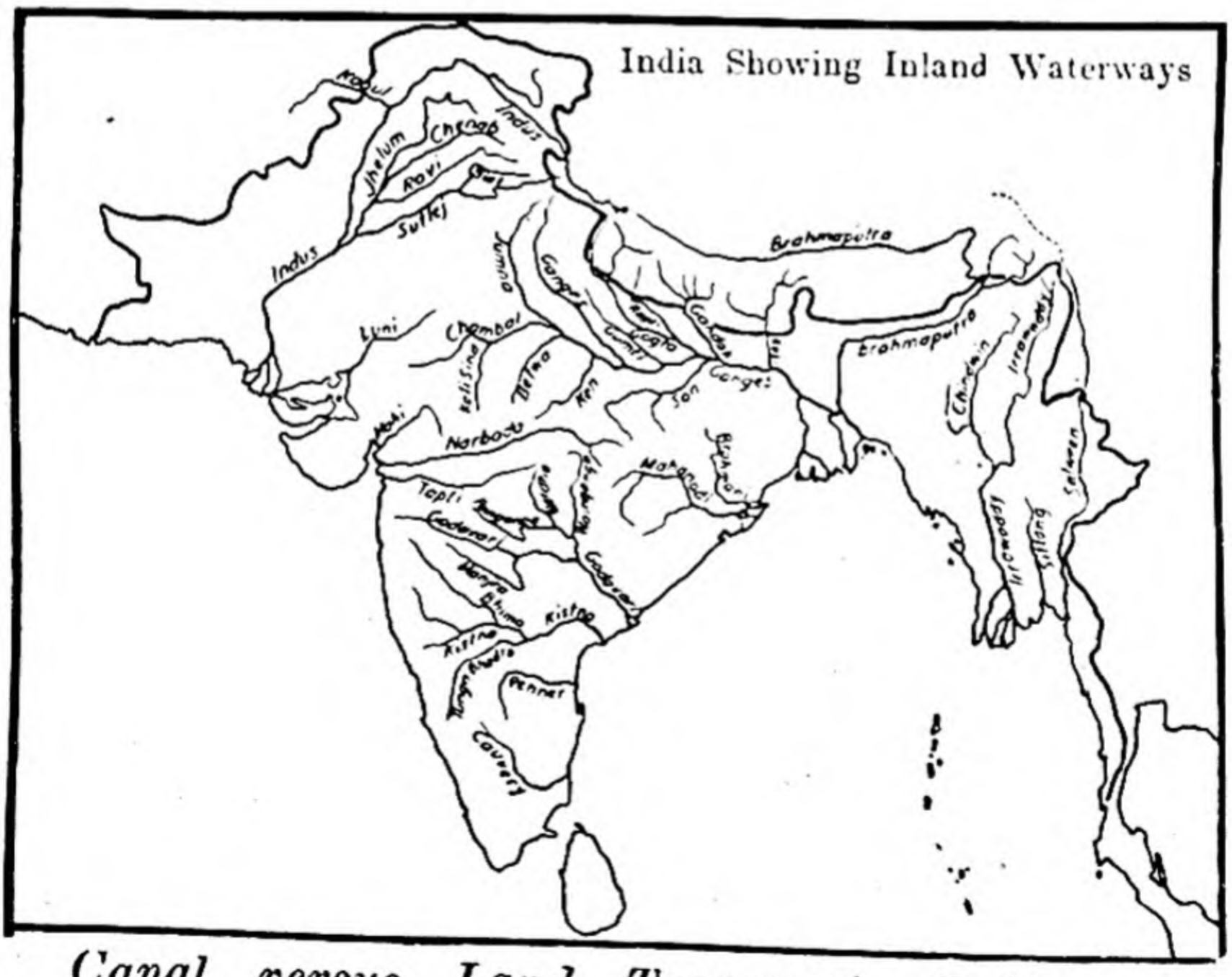
It is a pity that India with a 4,000-mile coastline with numerous ports and harbours capable of improvement, with a rich hinterland producing commodities suitable for foreign trade, an expanding road and railway transport system connecting the ports and inland towns, and her forests yielding timber for shipbuilding industry, should possess no mercantile marine worthy of her name.

But a hopeful sign is the establishment of the trainingship "Dufferin" which is sending out qualified Indian cadets to man and officer Indian mercantile marine. The vast coastline of India of about 4,000 miles with rich hinterland offers enormous scope for the development of coastal shipping only if the Government of India could come forward with a policy at least to license ships plying on the coast. But any scheme of licensing will fail to achieve the object unless at least 50 per cent of the tonnage to be licensed is owned, controlled and managed by Indians.

Inland Waterways.—Water-transport is the cheapest form of transport yet the possibilities afforded by the big river systems of Northern India have not been fully utilized. The Deccan rivers are unsuited to navigation except near their deltas and upper reaches as they flow through hilly regions abounding in falls and rapids and the water-supply is scanty; but the northern rivers with their tributaries being fed

GIRLS COLLE

with snow are navigable all the year round. The Indus, for instance, is navigable for 800 miles up to Dera Ismail Khan, Ganges up to Patna and during the rains up to Cawnpore, and Brahmaputra up to Dibrugarh. Their tributaries like Chenab and Sutlej, Jamuna and Ghogra, and Surma are fit for navigation a long way up their courses. With regard to the canals, except for the Buckingham Canal between the deltas of Godavari and Krishna, the Ganges Canal from Hardwar to Cawnpore and half a dozen minor canals in Bengal, they cannot suitably serve as waterways. Though some of the existing canals could be widened and deepened to make them more useful for navigation, yet there seems little prospect of canals occupying a prominent place in the transport system of the country.



Canal versus Land Transport.—India needs canals more for irrigation than for navigation purposes, the present canals irrigating only 13% of total

cropped area. The prosperity of Indian agriculture is liable to suffer in case the water of parent rivers is diverted into navigation canals and their level reduced so that irrigation canals could not be adequately fed. Agriculture is India's biggest industry supporting directly a majority of 67% of its people, and she cannot afford to endanger the prosperity of this industry. As a matter of fact, there is greater need of canals for better and more extensive irrigation so as to insure against famines and droughts. Railway construction regulated by a more rational policy of building branch lines and better and harmonious coordination with road transport, cannot only successfully handle India's international trade but can also encourage it. In these circumstances it sounds unwise to waste capital on the construction of navigation canals that will prove, at the best, of doubtful utility. Navigation canals will receive freight only in times of bumper crops and general trade activity. In times of scarcity in agriculture and depression in trade they will be wasteful but the same investment in irrigation canals would go a long way to fulfil the greatest agricultural need for water. It will therefore be best in the economic interests of the country that the problem of transport be solved with roads and railways, and canals be mainly used for irrigation purposes.

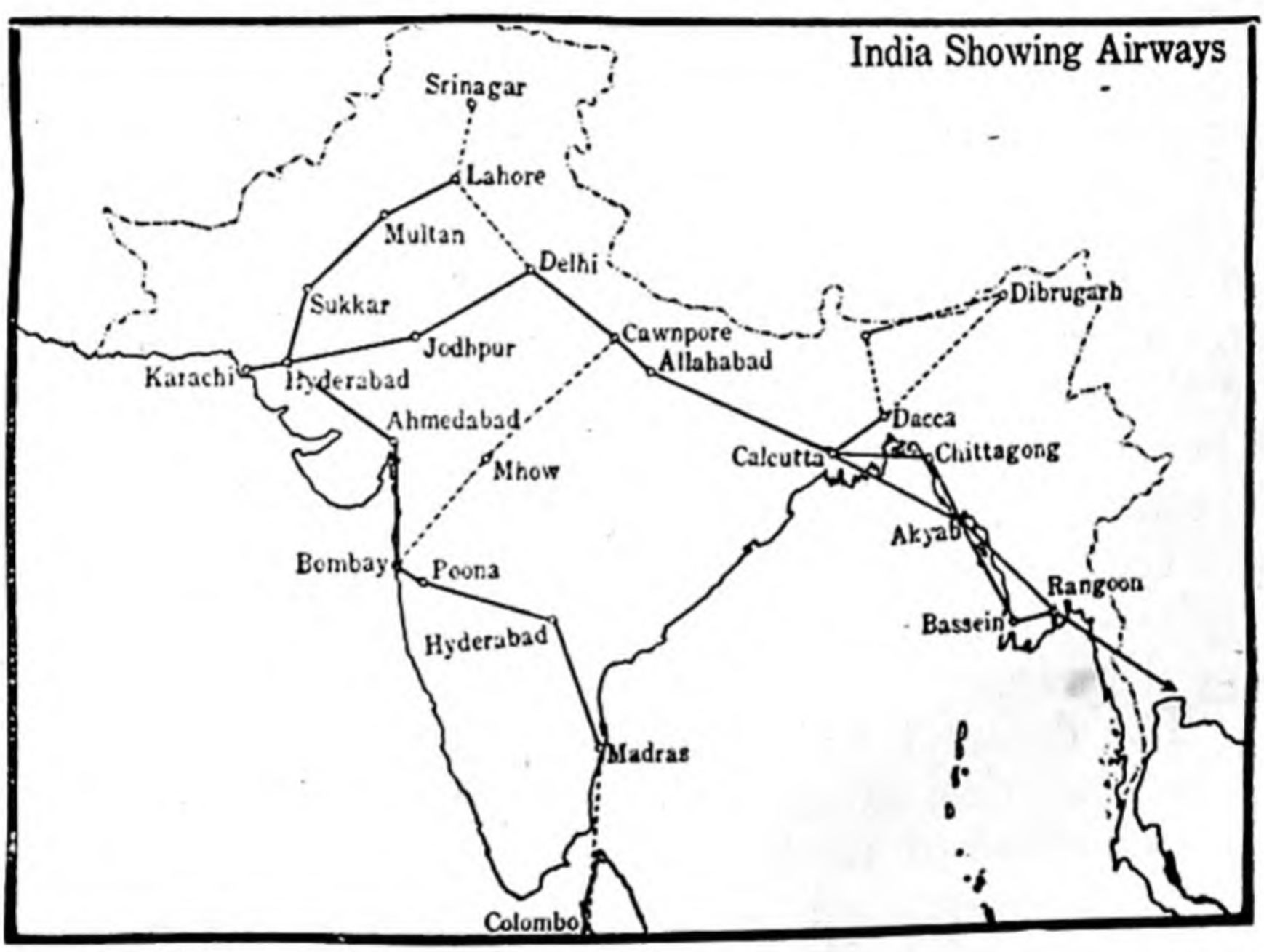
§ 5. **Airways.**—Geographically, India occupies a central position in the aerial communications between the West and the East. The British Imperial Airways extending from England to Australia and New Zealand, the Dutch lines, K.L.M. linking Holland with Netherlands, East Indies—Java and Sumatra, the French systems called Air France connecting France with Indo-China,—all must pass through India. Individually, her vest extent, her important towns situated hundreds of miles apart, unrestricted

facilities for landing grounds, calm atmosphere and starry skies rendering flying quick and safe whether by day or night, point to a hopeful prospect for the development of aviation. But as yet little has been achieved. Flying and Aero-clubs have started functioning at places like Bombay, Karachi, Jodhpur, Lahore, Delhi, Lucknow, Calcutta and Madras, yet they are too few and training in flying too costly to attract many and to create the air-sense among the people of this sub-continent. A scheme of subsidy to the flying clubs came into operation in April, 1939 according to which each club received a maximum of Rs.25,000 per annum divided into two parts *i.e.*, Fixed Annual Subsidy paid according to the number and types of planes maintained for the use of members, and Bonus paid for the pilots trained. Further the grant of aviation scholarships to suitable candidates and the scheme of training Air Force pilots introduced before the war emergency will provide the proper impetus to the growth of air-mindedness. At the same time the construction of an aero-factory in India supplying cheap planes will be of immense help in the same direction.

The demand for aircraft caused by the war led to the floatation of the Hindustan Aircraft Company with a capital of Rs.40 lakhs later on raised to Rs.75 lakhs and subscribed by the Mysore Government, the Government of India and Mr. Walchand Hirachand. India's first plane came out for test flight in July, 1911. The factory had been taken over by the Government of India for the duration of the War.

Air services for the carriage of mails and passengers are operating between Karachi and Calcutta as a link in the Imperial Airways, Karachi and Lahore, Karachi and Bombay, Bombay and Trivandrum, Bombay—*via* Poona—to Madras and thence extended to Ceylon, Calcutta and Madras, Calcutta

to Dacca and to Rangoon. The southern services are run by Messrs Tata Sons and Co. while the bi-weekly service between Calcutta and Rangoon and daily service between Calcutta and Dacca are operated by the Indian National Airways. They also run during the pilgrim season a service between Hardwar and Gochar on the way to Badrinath and have a project to maintain a regular service between Lahore and Srinagar. In spite of the unparalleled opportunities available in the country and compared to the



progress made by the countries of Europe, India's position in aviation is insignificant. Like Railways, roads and shipping, aviation too remains undeveloped in spite of all the conditions for its development being fulfilled in the country.

Post-War Plans.

A net work of 111 aerodromes and landing grounds is part of the Government of India's 10-year

Rs. 15½ crores plan of post-war aviation programme. Of these 91 are already in existence, which such of the R.A.F. aerodromes as are existing and can be made available will be taken over. It is proposed to equip 78 aerodromes for night flying.

EXERCISES

1. What changes in rural industries and agriculture have resulted from cheaper and quicker transport?

2. How does transport affect marketing? Why has the economic development of rural India been so slow?

3. Give an account of the means of transport available in India. In what directions would you like any improvements to be made?

4. Which one of Roads and Railways will you prefer to be expanded now in India? Give reasons.

5. What scope does India offer for airways and inland water-ways development? Would you like the expansion of navigation canals rather than the railways? Why?

CHAPTER VI

INTERNAL AND EXTERNAL TRADE OF INDIA

§ 1. **Inland Trade.**—Greater attention having been paid to India's foreign trade during the last eighty years, the real importance of her internal trade is not fully realized though she is really more interested in her internal trade. Her big dimensions and varied natural resources coupled with the diversity of climate and physical conditions fit her to enjoy a vast internal trade. She possesses materials, money, men and markets, all the necessary qualifications that go to make a great industrial and commercial country. But these advantages have not been turned to account. While the U.S.A., Canada and Japan expanded their trade during the Great War, India failed to avail of the opportunity, nor has she fully developed her trade since then.

Various estimates have been made of the value of India's internal trade; some putting it at 4 times the value of her external trade while others at 15 times at the least. Again, it is claimed that for every acre of land producing exportable goods there are eleven acres producing goods for home consumption, while most of Indian manufactures are being distributed and consumed in the country. In the absence of organized and adequate information it is difficult to arrive at an accurate, even approximate, calculation, yet it is generally accepted that her internal trade is several times more valuable than her external trade.

The development of roads and railways and the means of communications has led to the establishment of important trading centres like Lahore, Amritsar, Delhi, Cawnpore, Lucknow, Benares, Jubbulpore,

Nagpur, Amraoti, Sholapur, Bangalore and Hyderabad in addition to the principal ports. And though these markets are helping to collect raw materials from neighbouring rural areas for export and distribute the imported articles far and wide in the country, they are at the same time successfully serving the cause of a prosperous local and inter-provincial trade. With an expansion in the banking facilities and arrangement for storage of agricultural produce along with further improvements in the means of transport and communications, the internal trade is bound to achieve greater progress.

§ 2. **Coastal Trade.**—India's coastal trade should be treated as a part of her internal trade because foreign merchandise figures only to a small extent in her exports and imports. Due to separation of Burma, her trade with that country now forms a part of her foreign trade and the value of the coastal trade has been reduced. The commodities mainly transported along the coast are rice, cotton, cotton goods, jute goods, betel nuts, timber, petroleum and kerosene oil. Their quantity is estimated at 4 million tons and the total value of exports and imports amounts to Rs. 175 crores approximately. For its further development the construction of a mercantile marine to ply along the coasts is essential but this cannot be achieved unless the Government comes forward with a bold supporting policy. The existing ports should also be improved and their communications with the important inland towns developed. At the same time railway freights between the ports should not be fixed at rates prejudicial to the growth of coastal trade.

India's Foreign Trade

§ 3. **Sea-borne Trade.**—In ancient days India was doing a prosperous trade with Babylon, Greece

and Rome, dealing chiefly in muslin (known as 'gangetica'), shawls, musk, amber, jewellery and works of art. Even in middle ages a brisk and valuable trade was maintained, both by sea and land, with the neighbouring countries on the Persian Gulf and East Coast of Africa, China and Indo-China. But the British conquest of India and the advent of Industrial Revolution in England dealt a severe blow to India's foreign trade and undermined her position of supplying specially cotton goods to almost half of the eastern hemisphere. In the time of the East India Company heavy taxes were levied and restrictions imposed on Indian weavers and production began to be guided and controlled in the interest of British trade. The court patronage was gone with the disappearance of Moghul Emperors, Rajas and Nawabs, and the quality of Indian products deteriorated. At the same time the import of cheap machine-made British goods drove the Indian weavers and artisans out of the market. India was reduced to the position of a colony—producing raw materials to feed the factories in England and providing a vast market for the sale of British manufactured goods. However, matters began to improve after the mutiny and a real progress in India's foreign trade was visible after the opening of the Suez Canal in 1869 which brought the Southern and Western European countries very much nearer her coasts. This improvement continued unchecked, but for a brief period of the Great War, till 1928-29 when India's foreign trade was valued at over Rs. 600 crores. Since then there has occurred a sharp decline in her trade along with every other country in the world owing to the severe and wide-spread economic depression, and now the present war has further disorganized her trade with the countries of Europe.

§ 4. Following are the figures of exports of

merchandise for the year 1943—44 and 1938-39 given together to show changes brought about by the war.

Exports.	Value in lakhs of rupees		Percentage on total exports of merchandise	
	1938-39	1943-44	1938-39	1943-44
1. Jute				
Raw	1340	832	8·2	4·2
Manufactures	2626	4946	16·1	24·8
2. Cotton				
Raw and waste	2467	749	15·1	3·7
Manufactures	712	4248	4·4	21·3
3. Tea	2342	3754	14·4	18·8
4. Seeds	1:09	1151	5·6	5·8
5. Leather	528	437	3·2	2·2
6. Metals and ores	491	350	3·0	1·8
7. Grain, pulses and flour ...	774	231	4·8	1·2
8. Raw wool, & manufactures	385	235	2·4	12
9. Hides and skins. raw ...	385	412	2·4	2·1
Others	. .	...	...	...
Total Exports	16293	199 :0	100%	100%

1. *Jute*.—This year, 1943-44, the exports of raw jute declined while jute manufactures show some increase compared to 1938-39, but both were below the figures for the year 1941-42. This fall was due mainly to the shortage of shipping space and partly to reduced production owing to the exodus of population from Calcutta following a set-back in the war situation. The chief customers were the United kingdom and United States among the united nations. Jute manufactures consist of sacking bags and hessian gunny bag and gunny sheets and their value was twice that of the raw jute exported. Jute exports constitute more than one-quarter of all merchandise exported from India.

2. *Cotton*.—The purchasers of Indian raw cotton used to be Japan, China, United Kingdom, Ger-

many, France, Italy and, to a minor extent, U.S.A., and Netherlands. The exports to Japan declined while to China and U. K. showed improvements as compared to the preceding year. The cotton manufactures are exported to Malaya, Strait Settlements, Ceylon, Aden, Iran, and East Africa and consist of shirting and longcloth, chadars, dhuties, sheets, drills and certain varieties of coloured piece-goods. The figures for 1938-39 and 1943-44 reveal in a striking manner the change brought about by the war. While in the previous years the raw and waste cotton used to dominate over the cotton manufactures, in the year 1943-44 the picture was entirely changed. it was because of the uncontested markets India enjoyed in the neighbouring countries as Japan became an enemy country and her competition ceased altogether while England was too busy in the war production to manufacture and export cotton goods. 1942-43 was the first year which showed an excess of cotton over every other export including Jute. But in 1943-44, the Jute manufactures regained their top-position.

3. *Tea*.—The exports amounted to 409 million lbs., out of the record production of 1542 million lbs. and United Kingdom took over all exports. All the exports to U. K. are not consumed locally but about 12% are re-exported to U.S.A., and European countries. Direct purchasers of Indian tea in addition to U. K. are Canada, U.S.A., Eire, Iran, Ceylon, Burma and Australia.

The first three articles of export—jute, cotton and tea—constituted over 3/4 of the total exports from the country.

4. *Seeds*.—The total export of oilseeds—313711 tons fell both in quantity and in value as compared to 1938-39. both linseeds and groundnuts recording substantial fall. The principal customers used to be United Kingdom, Germany and France but in 1943-44 the

British Ministry of Food was the main foreign client. It may be noted that linseed enjoys a preference in U.K. over Argentine seeds that dominate the world linseed market. The oilseeds are used in making lubricants, soaps, cosmetics and other industrial products. By their exports India loses the raw material for these articles and also the cake that could be used as manure for fields and fodder for cattle.

5. *Leather.*—Huge quantity of leather is exported to Western European countries though it is reimported in the form of shoes, beltings and other requirements.

6. *Metals and Ores.*—The growing domestic demand caused by the approach of hostilities to Indian frontiers was responsible for the drop in the exports of metals and ores from this country. Manganese, mica and pig-iron are the chief exports, in this very order of importance. The largest purchaser of manganese used to be France before the war, but the United states took the lead on account of her war stock piling programme. The exports of pig-iron were Japan, U. K. and U.S.A., but the exports declined to the first named for obvious reasons.

7. *Grains, pulses and flour.*—The need for conserving supplies of food, grains and flour for domestic requirements was responsible for curtailment of exports in 1942-43 during which the shipments to the overseas countries fell drastically below the level of the previous year. Before the war, the U. K., Germany, Japan and China purchased these articles from us.

8. *Raw Wool.*—United Kingdom is the most important importer of raw wool followed by U.S.A. Raw wool was valued at Rs.120 lakhs while rugs and carpets accounted for the rest.

9. *Hides and Skins.*—Increased demand for hides and skins by the home industry had the inevitable result of lowering the exports in 1943-44, the decline was shared both by raw as well as tanned hides and skins. The raw and tanned hides comprised 64% and 36% of the exports.

§ 5. The following are the chief imports of merchandise for the year 1943-44 and 1938-39 given together for comparison.

Imports	Value in lakhs of rupees		Percentage on total imports of merchandise	
	1938-39	1943-44	1938-39	1943-44
1. Cotton and cotton goods ...	2266	1886	14 9	15·9
2. Machinery and millwork...	1905	1139	12·5	9·6
3. Oils	1562	3633	10 3	30·6
4. Grain, pulse and flour ...	1376	148	9·)	1·2
5. Metals and ores	1087	423	7·1	3·6
6. Vehicles	668	126	4·4	1 1
7. Chemicals, ...	...	496	...	4·2
8. Instrument, apparatus and appliances	585	301	3·8	2·5
9. Paper and pasteboard ...	323	179	2·1	1·5
Others	...	...	...	...
Total value of imports ...	15233		100%	100%

1. *Cotton.*—India produces about 3/4 of her requirements in cotton goods. In 1938-39, India imported Rs.1415 lakhs worth of cotton manufactures, and Rs.293 lakhs worth of twist and yarn. The chief sources of imports were the United Kingdom and Japan while imports from China were on the increase due to the establishment of Japanese factories on the Chinese territory. Japan was Britain's formidable rival in Indian cotton market as may be seen from their percentage share in the imports of piece-goods, and she retained her share at the cost of U.K.

and Indian mills inspite of heavy duties imposed on her goods.

Year	Grey		White		Coloured etc.	
	U. K.	Japan	U. K.	Japan	U. K.	Japan.
1936-37	20·7	78·3	74·2	22 1	44 6	51·2
1937-38	I8·0	81 8	63 6	32·1	44·6	51·8
1938-39	11·6	88 0	57·0	39 1	34 8	61·0

In 1943-44, the imports of raw cotton fell heavily, yarn declined to Rs.12 lakhs, and cotton manufactures to Rs.134 lakhs. A drop in the quantity of manufactures and yarn can be imagined from the threefol l rise in prices. The imports were mainly from United kingdom though U.S.A. sent an occasional shipment, while Japan which dominated our import trade in cotton manufactures was completely out of the picture during the year. In post-war years the industry in India shall have to face increasing competition in the home market from U.K. and U.S.A., though Japan will not be able to join in the competition for some years to come.

2. *Machinery and Millwork.*—India depended almost entirely on imports of machinery of all kinds from the United Kingdom, Germany, Belgium and the U.S.A. Machinery for cotton, jute, sugar, paper, woollen and oil mills in addition to tea, rice, flour and electricity is imported while the tools, instruments and spare parts needed in every kind of mechanical requirements are also received from foreign countries. The lack of machine-making industries in the country is an important factor responsible for the slow industrialization of India. Even during the War period, little has been done to manufacture machine tools in the country with the result that the post-war industrializa-

tion will be delayed till machinery and machine tools are imported from U.K. and U.S.A. for which there are no early prospects.

3. *Oils.*—Petrol, benzine, lubricants, crude and heavy oil and kerosene for industries and transport purposes are imported from Burma, Iran, Iraq, U.S.A. and Russia.

The imports of oils in 1943-44 constituted the biggest item of the import list responsible for 30% of the total value compared only to one tenth of the prewar imports. Obviously oil being the main sinew of a mechanized war, it occupied the place of honour in the list.

4. *Grains, Pulses and Flour.*—The chief grain imported is rice from Burma and to a small extent from Ceylon. In spite of huge areas under rice cultivation in the country her production of the article is insufficient to meet her needs. In 1943-44 the imports almost Vanished as Burma was under the occupation of the Japanese, and Ceylon being the lease of the South-East Asia Command could not afford to spare her quota.

5. *Metals and Ores.*—Iron and steel manufactures like nuts and bolts, hoops and strips, sheets and plates, bars and wire, pipes and fittings and hardwares of various kinds are imported from the United Kingdom, Germany, Belgium, France, U.S.A. and Japan. These imports also fell during the war.

6. *Vehicles.*—Under this head are included locomotives for railways, motor cars, carriages, aircrafts and their parts. The chief exporters of vehicles was U.K. followed by U.S.A., Canada and Italy. The imports of motor vehicles in 1938-39 numbered 18866 compared to only 41 worth Rs. one lakh in 1943-44.

7. *Chemicals* occupied a more prominent position in 1943-44 compared to 1938-39 when they were

treated as a very minor item. The bulk of the imports came from North America during the war as supplies from the two other important sources, Germany and Japan were cut off. A feature of the year was the further expansion of Indian chemical industry and the absence of supplies of certain chemicals from abroad gave stimulus to the domestic enterprize.

§ 6. **Important Features of India's Foreign Trade.**—(*i*) Prior to 1939 India exported mainly raw materials like cotton, jute, oilseeds, minerals, hides and skins and wool, while her imports chiefly consisted of manufactured goods, like cotton, woollen, silk and artificial silk goods, machinery, instruments and appliances, motor cars, hardwares, chemicals and others. During this war the position of manufactured goods improved over raw materials exported, the ratio between them changing from 29·8% and 45·8% to 54.3% and 21.8% from 1938-39 to 1944-45. On the other hand the trend was reversed in the case of imports while the value of manufactures imported declined during the war period from 62 to 32 per cent. the raw materials improved their position from 22% to 59 per cent. But that was only a temporary phase, and it can be turned into a permanent feature of our foreign trade if we follow a policy of rapid development of our industries with full patronage from public and Government support by way of protection, whenever deemed necessary.

(ii) Of the countries trading with India, United Kingdom is the single country doing the most of foreign trade, though her share had considerably declined since the Great War. Japan occupied the second place, closely followed by Germany and United States of America. In 1913-14 the imports from U. K., Japan, Germany and U. S. A. amounted to 64.1, 2.6, 6.9 and 2.6 per cent of the total respective-

ly, but in 1934-35 the respective share was 40.6, 15.7, 7·6 and 6·4 per cent. Japan had been gaining on United Kingdom; as a matter of fact, Japan's gain had been United Kingdom's loss. Even in 1935-36 India proved a somewhat disappointing market for British goods, specially cotton piece-goods; while Japan established her position still more strongly. In the export trade, the share of Germany and U. S. A. had gone down, while U. K. and Japan increased their portion from 23.4 and 9.1 per cent in 1913-14 to 31·6 and 15·7 per cent in 1934-35. But it should be noted that the balance of trade with England was against India—India purchasing more from England than England purchasing from India.

Of several causes responsible for the decline of British imports into India the most important ones are: (a) the industrial expansion of India, specially the growth of cotton manufactures; (*b*) the growth of Swadeshi Movement encouraging the use of Indian goods in preference to foreign article; (*c*) the heavy labour cost of manufactures in England compared to low wages prevailing in Japan responsible for cheap production of articles in latter country; and finally (d) excellent commercial organization developed by foreign countries succeeding in pushing the sale of their goods more than English merchants who have neglected this aspect of the business and counted more and more on England's political position in India to help their trade.

(*iii*) The balance of India's foreign trade has usually been in her favour—her exports exceeding the imports. Only since the onset of the economic depression followed by severe fall in agricultural prices and imposition of high import duties by India's customers, her exports declined steeply so much so that in 1932-33 they reached the lowest point of Rs. 135 crores compared to imports worth

Rs. 133 crores. Being a debtor country, India needed a favourable balance with which to meet her obligations arising from various economic services which she received from foreign enterprises like shipping, banking, insurance and others in addition to Government of India's obligations known as "Home Charges." These charges alone amounted to nearly Rs. 40 crores annually to meet the interest on her foreign loans (Rs. 478 crores on 31-3-1937), with which her railways and canals have been constructed, maintenance of India Office and High Commissioner's Office, pensions and allowances of European officers retired from Indian service, cost of armies recruited for Indian service and trained in England, currency and mint, specially the printing of notes, civil works, stationery and printing, and the purchases of the Indian Stores Department made outside India. Though the World War II has enabled India to pay off her debts and changed her position from that of a debtor to a creditor country, commercial, political and military services will have to be paid as long as our economic and political status remains what it has been in the past and "Home charges" will have to be met though interest charges will no longer figure in the list.

(*iv*) In the past this favourable balance of trade after meeting the obligations detailed above, has been utilized in *importing precious metals* which have formed a regular feature of India's imports. Since 1893 up to 1930-31 the imports of gold amounted to Rs. 695 crores, a factor that earned for India the undeserved nickname of the 'sink of gold.' This tendency has been reversed since 1931 when England "went off gold" and the prices of gold in foreign markets rose high, while India's exports declined, the favourable balance was almost wiped out, depression in the country was acute and people were forced

by adverse economic conditions to part with their savings. With an improvement in her foreign trade these exports of gold have been reduced, but since 1931 over Rs. 375 crores worth of gold has already left India mostly to London and in smaller quantities to New York and Paris. Thus India's "hoards" of gold ultimately went to increase the English currency reserves and English foreign exchange—a service that has been appreciated by British economists and bankers.

(*v*) While exports are duty-free, except rice and jute, most of the imports pay *high revenue duties** at the present general level of 25%. The Government of India has also been following the policy of *discriminating protection* thereby levying high protective duties on articles like sugar and matches to encourage the development of these industries in the country.

(*vi*) An attempt has been made to regulate India's trade with British Isles and Japan by entering into trade agreements with them and such agreements may also be made with other countries like U.S.A. and South Africa with which India has a valuable trade.

(*a*) Her trade with British Isles (and other parts of the British Empire) is governed by the Ottawa Agreement reached in August 1932 and supplementary Indo-British Trade Agreements signed in 1935 and 1938. The substance of these agreements is that British goods on being imported into India pay generally 10% lower rates than those imposed on goods coming from non-Empire countries, for example, Italy and Germany. Such concession or preference is only $7\frac{1}{2}$ per cent in case of motor vehicles but much higher in the case of cotton piece-goods and

---

* See chapter on Public Finance.

iron and steel goods. The Indo-British Agreement of 1935 reduced the Ottawa preferential rates by another 5 per cent thus bringing the import duties on plain grey cotton piece-goods to 20% *ad valorem* or $3\frac{1}{2}$ annas per lb. The duty of cotton goods was further reduced by 5% later on and now stands at 15% only. In return for these concessions to British goods, Indian goods are allowed free entry in England in case similar goods coming there from non-Empire countries are taxed up to 10% duty. Linseed, for example, enjoys a secure market against foreign linseed on which 10% import duty is imposed in England; and the consumption of Indian cotton in the mills of Lancashire and British colonies has also been encouraged.

(*b*) An agreement with Japan, called the indo-Japanese Agreement, was concluded in July 1934 according to which the duty on Japanese cotton piece-goods was not to exceed 50% *ad valorem* or $5\frac{1}{4}$ annas per lb. whichever was higher while Japan undertook to purchase Indian cotton in exchange for piece-goods sent to Irdia. The basic rate of exchange was fixed at 325 million yards of piece-goods imported in India for one million bales of cotton to be purchased by Japan, while for every additional 10,000 bales of cotton taken in excess of the million bales Japan could send $1\frac{1}{2}$ million yards of cloth extra, but Japanese imports were to be reduced by 2 million yards for every 10,000 bales of cotton purchased below the million level. This agreement has been modified by a new Indo-Japanese Agreement in April 1937 and the basic quota fixed was 285 million yards of cloth for a million bales of cotton.

§ 7. **Overland Trade.**—India's present overland trade is much smaller than her prosperous ancient trade, yet its extent is considerably larger than it was during the Moghul period. Her land frontier

of about 6,000 miles, bigger than her coastline, brings her in touch with a number of countries but, due to thick forests and high mountains on her borders, full advantage of this suitable geographical position cannot be taken. There are but a few passes like Bolan, Gomal and Khyber on the west linking her with Afghanistan and Chinese Turkistan; with Tibet, Nepal and Bhutan her trade passes through Leh, Almora and Shillong; while the chief means of communication with indo-China runs along the valley of the Brahmaputra. From these countries India imports grains and pulses, oilseeds, raw jute, hides and skins, wool and carpets, while to them she exports cotton, cotton yarn and piece-goods, salt, sugar, tea, tobacco, metals and machinery and grains and pulses. India, being economically more advanced, exports mainly manufactured goods, while imports consist chiefly of raw materials. In 1924-25 her exports and imports (excluding precious metals) amounted to Rs. 23 and Rs. 18·7 crores respectively. With further industrialization of the country she will be able to nurse and develop this trade more to her benefit as she will be in a position to export her own manufactures in place of foreign goods passing through India to these countries.

§ 8. **Direction of India's Foreign Trade.**—In the foreign trade of the country, British Empire figures more prominently both in imports and exports than the non-Empire countries, and the United Kingdom leads among the Empire countries as is illustrated by the following :—

Year	Imports in crores of Rs.			Exports in crores of Rs.		
	U. K.	Empire	Others	U. K.	Empire	Others
1938-39	46·5	88·6	63·7	55·5	85·4	77·4
1941-42	36·6	105·6	67·6	76·9	149·0	88·6
1942-43	29·5	61·3	49·1	57·3	125·9	61·7

It has been shown earlier that the share of United Kingdom both in imports and exports had been declining while that of Japan, Germany and United Kingdom had been rising before the war. Japan has been a serious rival of Britain and the loss of U. K. has been her gain specially in imports. The War has dried up the channels of our trade with the enemy and enemy occupied countries but as a compensation our trade with the U. S. A. has shown signs of expansion and some Empire countries like Australia are also beginning to import more of our goods now. Due to Britain's preoccupation in the manufacture of war materials she was not able to retain her position in India's imports (Rs. 29·5 crores only in 1942-43) and indications of heavier imports from other countries are not wanting. At the same time the enquiry of the commission headed by Sir Alexander Roger resulted in the manufacture of war goods in India for the supply of the Middle-East and Far-East zones and that appreciably augmented her export trade to Empire countries. The figures given below bear out the above tendencies. (Figures in crores of rupees.)

Country		1938-39	1944-45
Empire Countries			
Aden and dependencies	...	·9	4·3
South Africa	...	1·5	11·9
Kenya	...	2·1	6·9
Australia	...	3·0	14·7
New Zealand	...	0 5	2·3
Non-Empire countries.			
U. S A.	...	13·9	46 8
Turkey	...	·4	1·7
Arabia	...	1·0	2·3
Iraq	...	0·5	2·7
Iran	...	0·8	2·7
Egypt	...	1·2	3·4
West Indies	...	0·8	2·3
South America	...	3·9	7·5

The U. S. A. and the Middle-East countries played a prominent part in the imports into India while Canada and Australia have also increased their share. See the figures below given in crores of rupees.

Country		1938-39	1944-45
Canada	...	0·9	3·7
Australia	...	2·4	10·3
U. S. A.	...	9·8	50·5
Iraq	...	0·5	1·2
Iran	...	3·5	49 3
Egypt	...	2·2	17·4

§ 9. **Commercial Intelligence and Statistics.**— The Department of Commercial Intelligence and Statistics (1, Council House Street, Calcutta) is of immense service in helping the extension of both internal and external trade of the country. It embraces two distinct classes of work: (*i*) the collection and dissemination of information connected with overseas trade which may be of use to Indian firms, and (*ii*) the compilation and publication of All-India Statistics. It helps businessmen by furnishing them with important phases of the sea-borne trade of India so that they may regulate their activities according to trade conditions prevailing in foreign countries. A similar advantage can also be taken in connection with inter-provincial trade within the country.

Since 1933, another Statistical Research Bureau is operating for the continuous analysis and interpretation of economic and statistical facts and problems of the country. The Director-General of the department issues annually publications like Review of the Trade of India, Statistical Abstract for British India, Agricultural Statistics, Estimates of area and yield of principal crops among others. A

weekly journal called "The India Trade Journal" is published containing information about crop produce, market reports, price and trade movement of staple exports, and imports and several other important matters likely to be of enormous use to trade and industry. The utility of Commercial Intelligence and Statistical Research Bureau can be enhanced if the information broadcast is more detailed, and more prompt. The regulation of production and movements of goods can be achieved more satisfactorily if the information conveyed by the publications is not too late, as it sometimes is. With a closer cooperation between the Central and Provincial Statistical Bureau on the one hand and voluntary institutions like the Economics and Commerce Departments of various universities, Chambers of Commerce and private bodies on the other, a speedier and more accurate information will be available with better service to the country.

EXERCISES

1. Describe the economic services rendered by merchants and businessmen and show that they are producers in the same sense as farmers and factory workers.

2. Estimate the comparative value to India of her internal and foreign trade. What means do you suggest to improve the former?

3. Discuss briefly the main characteristics of India's foreign trade.

4. Give six main items each of India's exports and imports and comment on them.

5. What do you understand by 'discriminate protection'? How does the policy of preference given to Empire goods tally with it?

6. Why is it necessary for India to enter into trade agreements with countries like Britain and Japan? Give briefly the terms regulating India's trade with these two countries.

7. Estimate the importance of commercial intelligence and statistics to India's inland and foreign trade.

CHAPTER VII

MONEY

§ 1. **Definition of Money.**—Money is any commodity which passes freely from hand to hand as a means of exchange and is generally accepted in final payment of dues. Money is purchasing power and it entitles the holder to purchase goods or services of other people. The present stage of economic development is called the *money economy* because money is indispensable in every aspect of economic life. Production of wealth with division of labour on large scale has been facilitated by money and so also its accumulation as capital; difficulties of barter have been removed; a more elaborate and equitable distribution of wealth among the factors responsible for its production has been brought about; and finally a more sensible and rational expenditure of individual and social income has been made possible.

We have for such a long time been accustomed to the benefits and conveniences of money that we take them for granted, and fail to realize that the present economic structure is entirely dependent on the smooth working of our monetary system. But the evolution of money from barter economy—the stage in our economic life when barter was the only form of exchange—has been a slow and tedious one. The invention of such an important medium is the result of long experimentation. From the beginning of economic life, bows and arrows, spears and axes, cattle, hides and ivory, grains and materials of different kinds have been used as money, but each was in its turn replaced by another that promised to perform the functions of money better, longer and at a lower cost. In course

of time every other form of money was driven away by metals like gold, silver, nickel and bronze whose pieces in varying sizes and weights circulate as tokens of money and are called coins. They will for long retain their position as media of exchange because they possess in greater degree the qualities that a money commodity should possess.

§ 2. **The Qualities of a Money Commodity.**—(*i*) *General Acceptability* has always been considered as the essence of money. It is of no advantage to a person to accept in payment of his goods and services a commodity which is not going to be accepted by others. Unless people in general are willing to accept an article as a common means of exchange it will have a limited circulation. Gold and silver have been popularly acclaimed as the right metals and they are used universally as money-commodities.

(*ii*) *Portability* is another essential attribute of a money-commodity. If a bookseller is offered a sack of grain as a price for a book, how will he handle fifty sacks if he sells as many books in a day? To serve as money, a commodity should have *great value in small bulk* otherwise it will be a hindrance rather than a facility if it cannot easily be taken from place to place or passed from hand to hand. Precious metals possess that quality of portability in them in a great measure.

(*iii*) Then comes the question of *imperishability*. In course of circulation, *i.e.*, counting, telling, storing etc., money-articles suffer a lot of wear and tear, and if in addition to being perishable a commodity is also soft or brittle, its use as money will not be economical. To harden the metals still more, some kind of alloy is mixed with them so that they may enjoy longer life.

(*iv* & *v*) Money is expected to be of a *uniform value*, a quality chiefly found in the pieces of metals.

Horses cannot be uniform; nor grain nor skins. The employment of a commodity which lacks *homogeneity* will mean unnecessary loss to people. Even coins have got to be uniform in value. If your rupee contains 165 grains of fine silver and mine—a Hyderabadi coin—less than that, they cannot be used uniformly.

(*vi*) Divisibility of money is another qualification. It is to pass from hand to hand, and if it breaks by accident or is intentionally broken and in doing so loses enormous value, as happens with glass or diamond, it will not serve the purpose well. A money-commodity should be such as will retain the same value if it is divided into parts or reacquire it if these parts are again joined together and brought to the original form. No loss of value is involved in the case of gold and silver and they possess the required divisibility.

(*vii*) Easy and quick *cognizability* by mere touch or sound is essential. Horses and diamonds can be recognized by only experts and even they may commit mistakes. Such articles will not do for money. Unless money-commodity possesses this quality people will suffer from defraud or counterfeiting. To remove this danger, devices like stamping and milling the edges have been adopted.

(*viii*) To easily take to milling and stamping when minted into coins, or money units, an article should possess *malleability*. This quality reduces the cost of minting. It also enables people easily to turn in into the original commodity when so desired and to have it converted into coins once again, if necessary.

(*ix*) *Stability in value* is a very important quality of money.—Its value should fluctuate as little as possible. The dangers of violent fluctuations in prices to both the producers and consumers are great. It will not be pleasant experience to wake up one morning and find that through no fault of one's own the money kept with him can buy only half of the com-

modities it had been buying till the last evening. Gold and silver, specially gold, have shown in the past greater stability in their value than what can be expected of any other commodity.

As these two precious metals possess the above-discussed qualities most among the commodities known today, they have been universally accepted as money-metals.

§ 3. **Functions of Money.**—1. *Money is a medium of exchange.*—The most important function that has given money its definition is that *it is a medium of exchange.* The services of money as such a medium are rendered to remove the difficulties of barter noted earlier. It will be no exaggeration to point out that the economic progress, that civilized communities have made so far, has been due to this efficient service of money. The division of labour, which is the basis of production and which makes other activities more profitable, is supported by the good medium of exchange. If it had not been possible for a carpenter, for instance, to make tables, earn money and with its help buy numerous articles that he wants for daily consumption, he would rather have spent his time in producing those articles that directly satisfy his wants. All people would sooner undertake those jobs that supply them things of immediate consumption rather than specialize in the production of one article, if easy and quick exchange had not been secured by money as a medium of exchange.

2. *Money is a measure of value.*—Utility of a commodity is a personal matter. It differs with different persons. A fountain-pen may have some utility to you as a buyer and to me also as a seller, but how much of it you are attaching to the pen, I do not, rather cannot, know; you too will be ignorant of my estimate of its utility unless I express it in terms of money. A greater difficulty arises when the utility

of a pen is to be compared with the utility of a goat, two different kinds of wealth giving different types of services. How can a businessman give you any correct idea of his riches increasing or diminishing in the absence of money? With the help of money all becomes easy. The value of every other commodity can be expressed and understood correctly. It becomes easy for consumers to lay out their expenditure, for organizers to fix remuneration for various factors he employes, and for the enterpriser to calculate cost and prices of goods he plans to produce. It is because money is a *measure* of value that it serves as a *medium* of exchange so freely and so easily.

3. *Money is a store of value.*—Goods can be stored but not as conveniently as money. They occupy plenty of space and are liable to deterioration. Then a great danger lies in the fluctuations of their value. In addition to these, they do not allow any choice to a man to change his mind. If I store wheat, I shall consume wheat later on or I should be prepared for a heavy loss in its exchange value if I change my mind and desire to buy rice for it. There is no such danger in the case of money. It *represents general purchasing power*, and as long as a person has a piece of money—say a rupee—he has got the freedom of choice of any of the innumerable articles that can be bought for it. This choice can be equally freely exercised today as to-morrow. A rupee will, for instance, remain a rupee and will not shrink, dry up or rot away if stored for any length of time.

Another great advantage of money as a store of value is that it can be easily and quickly invested in any enterprise or diverted from one enterprise to another with least inconvenience or expenditure. No other commodity is as liquid as money and that is why it is often called "*liquid asset.*"

4. *Money is a standard of deferred payments.*—

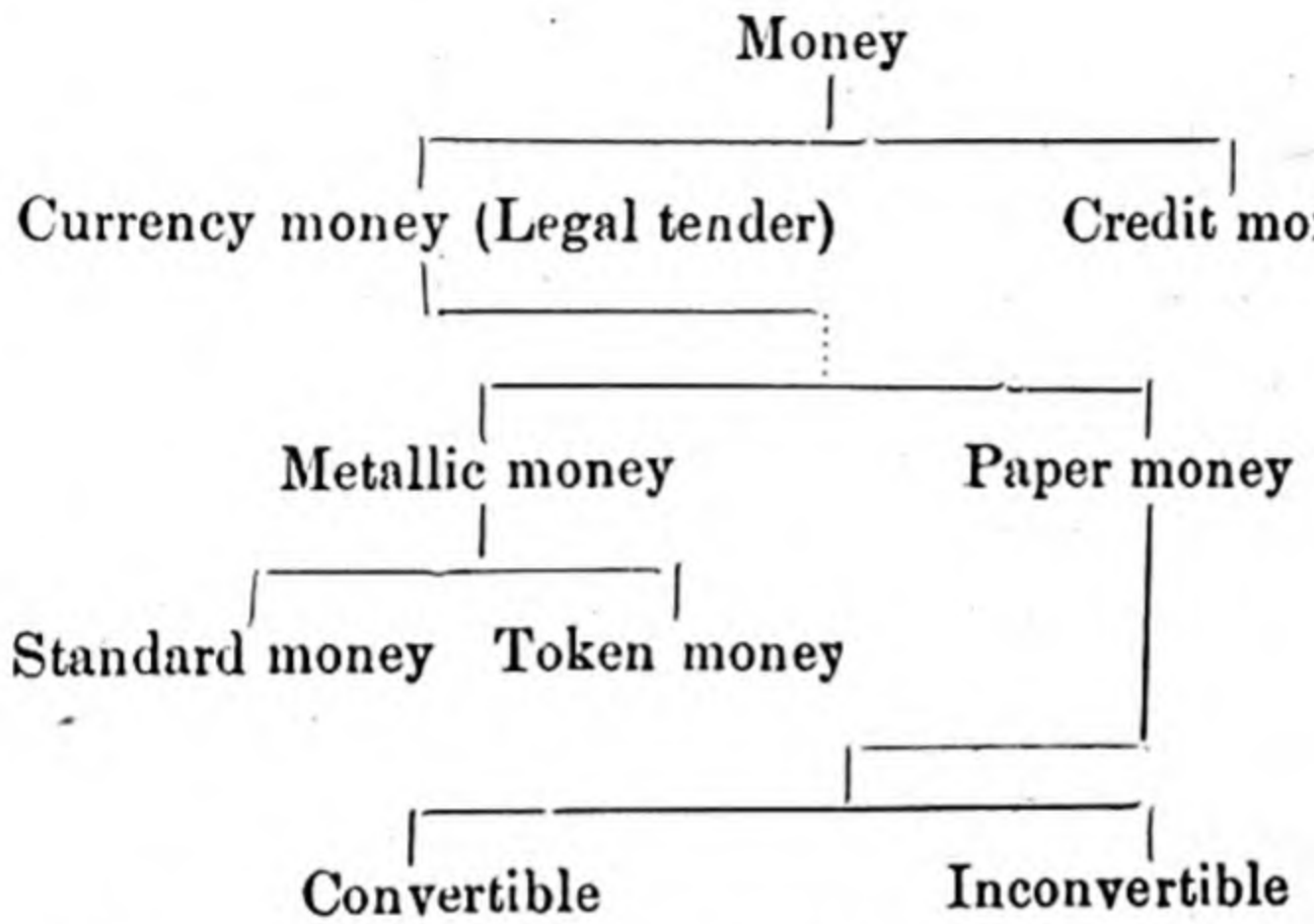
If borrowings are made in goods and also paid in kind, due to a change in their value during the time the debt has to run, the lender or the borrower is put to unwarranted risks. If the price of goods rises, and the borrower has to pay the same quantity of them as he borrowed, he will be paying more value than what he actually received. He suffers unnecessarily to the advantage of the lender. On the other hand, if the prices have gone down in the meantime, the creditor receives much less than the amount he parted with. Money is general purchasing power and though its value changes, yet it does very slightly as compared to the change in the value of any other single commodity. The reason is that while the prices of certain goods rise in the market, those of other goods fall; and because all these fluctuations must be reflected in the value of money, most of them cancel each other and the resultant change in the value of money is only slight. Therefore if debts are incurred and paid back in terms of money, the deal is unjust neither to the borrower nor to the lender.

Of these four functions, the first two—money as a medium of exchange and a measure of value—are of comparatively greater importance and are called the *primary functions* of money. The other two functions are called secondary functions or the *derived functions* as they flow from the first two.

§ 4. **Kinds of Money.**—*Currency and Credit money.*—The money or medium of exchange prevalent in a country is of two kinds—currency money and credit money. The currency money is usually supplied by a department of government called the currency department or by a bank on behalf of the government. The coins of different denominations—and notes also as their substitutes—bearing a definite relation to one another constitute a country's *currency system*. The credit money is supplied mostly by banks

and commercial houses in the form of cheques, hundis and others, but for its existence this kind of money ultimately depends on the currency money. It has no force of legal tender but its acceptance depends upon the credit of the issuing institution.

The following classification of money will be helpful:



All currency money, like the Indian coins and notes at present issued by the Reserve Bank of India, is *legal tender* as it has the authority of the law or the Government behind it. A refusal to accept it in discharge of debts will amount to an unlawful act and may be punished. Legal tender money may be metallic or paper money. The Indian coins from the rupee downward to the pie are the instances of metallic money while the currency notes of the value of from Rs. 5 to Rs. 10000 constitute paper money.*

§ 5. **Metallic Money.**—

Standard and Token Coins.—The coins possess two kinds of value in them: the intrinsic value or what the coins are worth as pieces of metal of which they

---

* For demonetization of notes of Rs. 500, Rs. 1000, Rs. 10,000 see section 16 of this chapter.

are made; and the face value or exchange value by which is meant their purchasing power as media of exchange. Coins whose intrinsic value is equal to their face value are called *standard* coins; while token coins are those that have their exchange value in excess of their intrinsic value. In India we have no standard coins, rupee and its sub-multiples being all token coins.

Limited and Un-limited Tenders.—Standard coins are issued freely and to any amount the economic needs of the community demand. They are *unlimited legal tenders*, i.e., they can be tendered or paid up to any amount in discharge of debts. Token coins are *limited legal tender* and can be paid only up to a certain limit, as they are meant to serve for small change only. The position of Indian rupee and half-rupee is unique in so far as they are token coins and yet unlimited legal tenders. Debts worth lakhs of rupees can be paid in terms of these coins; but other coins being limited tenders up to 10 rupees, cannot by themselves be legally forced in payment of dues in excess of that amount.

§ 6. **Free, Gratuitous and Limited Coinage.**—Standard coins are full-bodied coins and their value as metal and as coins being the same, they can safely be melted into pieces of the metal or the metal can be converted into coins. A country is said to have *free coinage* if its mints are 'open' to the public, *i.e.*, the minting authority allows the public the privilege of having their standard metal, gold or silver, converted into standard coins. If the government does not charge the cost of minting to the public the coinage is termed a *gratuitous* coinage. A coinage may be free yet need not be a gratuitous one if a payment for the cost of minting has to be made by the public.

The cost of minting a coin is called *brassage* or *mintage*, and the net profit that the minting authority

makes in coining Billion or Token coins is called *seigniorage*. The Government of India in issuing a pre-1940 rupee earned high seigniorage as shown below:

Value of 165 grains or 11/12 tola silver at Rs. 52/12/- per 100 Tolas ...	...	0—7—6
Cost of alloy 15 grains ...	...	0—0—1
Cost of assaying silver and minting	...	0—0—6
		0—8—1

Between 16 annas and 8 annas 1 pie is the seigniorage earned on minting a rupee. The seigniorage on half-rupees and four-anna silver pieces was approximately half and a quarter of that on the rupee. But since 1940-41 the silver contents of all these silver coins have been reduced to half their weight and, therefore, they yield higher seigniorage. Of course, the seigniorage in coining four-anna nickel pieces is more than in coining silver pieces of same value.

§ 7. **Debasement.**—(*i*) Debasement of a coin occurs when the fine metal contained in it is reduced. The Indian rupee, eight-anna and four-anna silver pieces used to weigh 180, 90 and 45 grains eleven-twelfths fine. Now though they weigh as before, they are 50% fine, that is, contain half of silver and half of alloy. They furnish interesting examples of debasement of today. (*ii*) Substituting a less valuable metal for a more precious one and thus reducing its intrinsic value is also an instance of debasement, as has happened in case of nickel four-anna and two-anna bits introduced in our country. A standard coin like a token one also suffers debasement if its metallic value or metal contents are changed and fixed at a lower level. The American dollar and French franc have recently been devalued and consequently may be taken to have been debased.

§ 8. **Appreciation and Depreciation of Money.**— Appreciation of money means a rise and depreciation means a fall in its value. Normally money measures the value of goods, but the value of money itself can be measured in terms of goods. If wheat is selling at Rs. 4 per maund, Re. 1 represents the value of 10 seers of wheat while 10 seers of wheat measure the value of one rupee. The rupee will be said to appreciate in value if it can buy more than 10, say, 12 seers of wheat and it will depreciate if it can purchase an amount of wheat less than 10 seers.

Looking from the side of wheat, the appreciation of rupee means a fall in the price of wheat, while the depreciation of rupee means a rise in the price of wheat.

At a particular time the community as a whole has a certain stock of goods which is available for exchange and no more than this can possibly be bought. On the other hand, there is a stock of money which the purchasers can spend; it is their maximum purchasing power and no more than this can possibly be paid as price for the exchangeable goods. It means that there is a certain rate of exchange or the ratio of values that exists between goods and money in a community at a certain time. For example, if 25 maunds of wheat be the only available quantity and Rs. 100 the maximum purchasing power, one maund of wheat will sell for Rs. 4, and a rupee will be worth a quarter maund of wheat.

If the amount of money in circulation is diminished, but the stock of exchangeable goods remains the same, more of the goods will be exchanged for a unit of money or less money will serve where more was wanted before. This rise in the purchasing power of money is called its appreciation. On the other hand, if the amount of money in circulation is increased

without a corresponding increase in the stock of saleable goods, a money unit will buy a smaller quantity of goods or more of it will be needed to buy the former quantity. This is called depreciation of money. Likewise, if the quantity of money remains constant but more goods are produced and are available for exchange money will appreciate. If, on the contrary, goods are somehow destroyed as by war, earthquake or other agencies but the money in circulation remains the same, money will depreciate.

Inflation and Deflation.—An increase in the amount of money in circulation is termed *inflation* and a decrease in its quantity is called *deflation*. The quantity of goods remaining the same, inflation leads to the depreciation of money or a rise in the price of goods, while deflation results in the appreciation of money and a fall in the price-level.

§ 9. **Effect of Price Fluctuations.**—Price of a commodity or the commodities in general changes due to changes in the demand for and supply of the articles concerned. And because the quantity of money available to the society for expenditure regulates its demand for the commodities, the inflation and deflation also bring about price-changes as explained before. Fluctuations in prices take place all the time but are sometimes small like ripples on the surface of a tank and sometimes like big waves though great changes occur at great intervals.

Rising Prices.—Rising prices are welcomed by the producers and sellers of the commodities. Sellers gain on the stock that they hold as the sale-proceeds are more than what they had anticipated. The producers realize high prices from the wholesale and retail dealers and make good profits. They become optimistic, introduce improvements in the system of production and increase the scale of their business employing more labourers, these changes in their turn

reducing the cost of production and further increasing their profits.

The consumers dislike rising prices as the purchasing power of their income is reduced and they have to lower their standard of living. Persons who have fixed incomes as servants of all categories including labourers, and persons who live on the interests of their house property or other investments and deposits, find their income reduced in terms of goods and services that they used to buy.

Borrowers and creditors are affected in opposite ways. Borrowers who choose a period of high prices for the payment of their debts contracted at the time of low prices, pay really less in terms of commodities than what they got on loan. A rupee borrowed when wheat was selling at 10 seers a rupee means that the borrower received 10 seers of wheat on loan, but if the payment is made when wheat is selling at 8 seers a rupee means the repayment of only 8 seers of wheat. The creditors, on the other hand, cannot refuse to accept the payment of debt and they get less value than what they lent at the time of making the loan.

Rising prices are helpful to the Government as it can realize more tax revenue from people whose incomes and profits are increased and also more tax on the commodities because their value is increased.

Falling Prices.—The producers and sellers of commodities are adversely affected by falling prices. Their goods fetch less money and they have to reduce the scale of their business which results in lesser employment of labourers. Consumers gain and so also persons who have a fixed income as their money buys more goods than what it did before. The labourers, servants, pensioners, investors and propertied class people all gain. To the borrowers,

falling prices mean greater value to be paid to their creditors if the debt has to be redeemed at such a time. The creditors, on the other hand, get more than what they lent. The income of the Government from taxes is also reduced.

But a person is seldom purely a producer or a consumer, a creditor or a borrower. Usually he is both though not to the same extent. Consequently his gains or losses as a producer or a creditor are partly or wholly nullified by his position as a consumer or a debtor. The net loss or gain resulting in each case is the resultant effect of changing prices.

§ 10. **Index Numbers.**—Usually index numbers are used to measure the fluctuations in the general price-level. An index number can be prepared for any commodity or any group of commodities as desired but to calculate the changes in the general level of prices at least 20 such commodities should be chosen as are mostly used by a vast majority of people. Regular quotations of prices of each commodity should be collected from representative places and care should be taken to see that prices have been quoted for the same quality of the commodity each time. From these prices monthly or annual average price of each commodity is calculated. A basic period is to be selected for obtaining percentage prices on its basis, and this choice should be made carefully to avoid the times of wide fluctuations or abnormalities. When the percentage prices of the representative commodities have been calculated, these are to be added and then divided by the member of the commodities to give the index number for the particular month or year.

For the purposes of illustration only 2 commodities wheat and coal have been selected and the basic period is the month of January 1939. The average prices of these in January 1939, 1940 and 1941 were as follows:—

Period	Price of wheat per maund	Price of coal per ton
	Rs. a. p.	Rs. a. p.
January 1939 ..	3 11 6	6 10 0
„ 1940 ...	5 6 0	7 3 0
„ 1941 ...	4 13 0	6 15 0

Taking January 1939 prices as equal to 100, calculate the percentage of subsequent prices on that basis. For example, price of wheat in January 1940 will be $\frac{\text{Rs. 5-6-0}}{\text{Rs. 3-11-6}} \times 100$ or 144 and tabulate the results as follows.

Date	Percentage price January 1939 = 100		Index number	
	Wheat	Coal	January 1940	January 1941
January 1940 —	144	109	$\frac{144+109}{2}$	$\frac{133+105}{2}$
January 1941	133	105	or 1265	or 119

The reading is that in January 1940 the prices were 26·5% and in January 1941 they were 19% higher than those ruling in January 1939.

§ 11. **Paper Currency.**—Currency notes are like token coins printed on paper. They have no intrinsic value but possess an exchange value equal to that of the metallic money they represent. And this is due to the legal support of the issuing authority carried by them. Paper currency is either convertible or inconvertible. It is *convertible* when the issuing

authority undertakes to redeem it in terms of standard coins if the holder of the notes desires to encash them. Indian paper currency is convertible currency. It is in the form of a 'promise to pay.' A five-rupee note, for example, bears the statement, "I promise to pay the bearer *on demand* the sum of five rupees at any office of issue." The expression 'on demand' is significant of the Reserve Bank of India's ever readiness to encash the notes at the will of the holder. The following account shows how the convertibility of Indian paper currency is maintained.

RESERVE BANK OF INDIA

ISSUE DEPARTMENT

BALANCE SHEET AS AT 2ND NOVEMBER 1945 (30 6.41)

Liabilities		In lakhs of Rupees	
Notes held in the Banking Dept.	...	1.173	1,307
Notes in circulalion :—			
(*a*) Legal Tender in India ..	...	1,16,890	26,001
(*b*) Legal Tender in Burma only	...	...	1,826
Total Notes issued or Total Liabilities ...	...	1,17,963	2,9134
Assets			
A. Gold Coin and Bullion :—			
(*a*) Held in India	...	4.441	4.441
(*b*) Held outside India	...	Nil	Nil
Sterling Securities	...	1,05,933	1,18,80
Total of A	..	1,10,374	16,321
B. Rupee Coin	...	1,805	3,681
Govt. of India Rupee Securities	...	5,784	9,132
Internal bills and other commercial paper		Nil	Nil
Total Assets	...	1,17,963	29,134

The ratio of gold reserve to the total notes issued is 3·8 per cent compared to 15·2% in 1941, while the sterling securities now constitute 89·8% compared to

41% in 1941. The metallic reserve, *i.e.*, gold coin and bullion and silver coin, amounts to Rs. 6246 lakhs or 5·3%, the lowest for several decades as against 27·9% in 1941, while the security portion held both in India and England together amounts to 94·7%. As the rupee notes are full equivalents of rupee coins, the reserve of coins has reached the record low level of just over 1%, the convertibility of higher denomination notes resting on the rupee notes.

The security portion of the reserve is called *fiduciary reserve* and is a source of income as it earns interest on it. Since the transfer of the management of currency to the Reserve Bank of India, the minimum statutory level of gold reserve has been maintained and rupee reserve steadily reduced. The low metallic reserve and predominantly high fiduciary reserve fully ensure a very economic management of the paper currency in India. The fourfold rise in note circulation from 1941 was due to normally expanded trade, industry and war requirements and this inflation was fully covered by sterling securities which will automatically be reduced when deflation sets in following the cessation of war time activities.

Inconvertible notes are not intended to be changed into cash by the issuing authority. They are called *fiat* money, circulating due to the credit of the bank or the government decree. The pound notes of England are inconvertible currency as the Bank of England will not pay a person £1 worth of gold on tendering the note for encashment. Strictly controlled and issued to suit the public demand, they are not a bad form of money. But the temptation to issue them in excessive quantity is great as there is no responsibility on the government to keep cash for their redemption. Of about three score instances of

inconvertible note-issue, the most notable ones are those of German 'Marks' during the Great War, and the 'assignats' during the French Revolution. Of course, the excessive issue of inconvertible notes leads to their rapid depreciation.

§ 12. **Advantages of Paper Money.**—In every country, paper currency forms a very important part of the monetary system, and with a development in its economic life the position and the importance of paper money will be increasing. It serves the purposes of exchange served by metallic money, and serves them better and more economically. Paper money is very light and. therefore, can be easily handled and cheaply transmitted through the post. It is very convenient to store as a great value is contained in a small volume.

A 10,000-rupee note can be folded up and carried in a waist-coat pocket without anybody being the least wise of its presence there. This system of carrying big amounts of money with one's person has the additional advantage of not exposing the person to any danger of being relieved of it by undesirable characters.

The cost of making it is almost negligible. Hundreds and thousands of rupees can be represented by a few square inches of paper costing only a few pies. If they are roughly handled and, therefore, soiled and torn, they can be quickly and cheaply replaced by new ones. Thus it can be said that the loss by wear and tear is none for practical purposes. Gold and silver coins are hardened by a mixture of alloy to reduce their wear and tear, but still they suffer a lot of loss in the ordinary course of currency and also at the hands of the pilferers. Chemicals are often applied to get a few grains of the metal out of them. The loss from these sources will be found considerable if it is calculated on the total number of all kinds of coins that are in circulation.

If a convertible paper currency can serve exchange purposes so well and so economically, it appears a trait of savagery to stick to gold and silver just because their dazzle appeals to the eye. Paper currency should be a better substitute for metallic one. Those countries, that use this form of currency more and more, are economically more progressive. It is in the countries that are still backward in the march of industrial civilisation that metallic currency is held in higher esteem than the paper currency. But it must be admitted that metallic coins will always be needed in every currency system to be used as token money and serve for small transactions.

§ 13. **Monetary Standards.**—1. *Mono-metallism or Single Standard System.*—A system of currency under which one metal is used as a standard of value is called *mono-metallism* and the country is said to be a mono-metallist country. Some countries have adopted gold as the basis of their currency and they are called gold-standard countries, like France; while others have silver as a basis of their currency (China). Gold currency, free and unrestricted, implies free coinage and free export or import of gold. If any restriction is imposed upon export of gold—an embargo on gold—the country ceases to be a free market for gold, and if the paper currency of the country can no longer be convertible into gold coins or bullion, the currency is 'off gold' or loses its 'gold basis.'

2. *Bi-metallism or Double Standard System.*—Under *Bi-metallism* two metals, generally gold and silver, are indifferently used as standards of value. It means free coinage of both silver and gold. the two standard *coins* having a fixed ratio of exchange between them. In U. S. A. gold and silver were coined on the same terms before 1873. A variety of bi-metallism was operating in France and the Latin Monetary Union till the early "seventies." Bi-

metallism can affect greater stability of prices in the country using it. It can also maintain a closer touch with price fluctuations in countries using double or single standard of either gold or silver, but the main difficulty in the smooth working of a double standard arises when one of the metals is over-valued and the coins of other metal, which is under-valued, begin to disappear from the market.

3. *Sterling Exchange Standard.*—India is a mono-metallist country with silver rupee as the standard of value, and paper currency convertible into rupees. For the purposes of external trade the Reserve Bank of India on behalf of the Government of India undertakes to supply pound-sterling at a rate which has been statutorily fixed at 1*s.* 6*d.* per rupee. It means that Indian currency is not convertible into gold either for internal or external purposes, but is irrevocably linked with English currency which itself is inconvertible into gold. This arrangement is called the sterling exchange standard and has been in force since September 21, 1931 when pound-sterling went off gold.

4. *Gold Bullion Exchange Standard.*—Prior to this date when English currency was unhinged from gold, England had a modified form of gold standard called the gold bullion standard. Under this system though pound notes were inconvertible into gold coins, yet they could be changed by the Bank of England into gold bullion. During this period too the Indian rupee was linked with pound convertible into gold bullion, hence the rupee became indirectly convertible into gold bullion and the system came to be known as the gold bullion exchange standard. In addition, the Government of India undertook to sell or buy gold in bars of 40 tolas at a fixed rate of Rs. 21-3-10 pies per tola. Thus though India had silver currency, it could be converted into gold in

India as well as in England through exchange into pounds. It enjoyed indirectly, though not legally, the stability of gold basis.

5. *Gold Exchange Standard.*—In pre-War days England had a full-fledged gold standard, *i.e.*, pound notes convertible into gold either for internal or external purposes and a free coinage. Indian rupee linked with pound, which was then as good as gold, became automatically convertible into gold and this system was known as the gold exchange standard.

§ 14. **Gresham's Law.**—During the reign of Queen Elizabeth an attempt was made to reform the currency system of the realm. Her predecessors had put into circulation a number of debased coins and she tried to replace them by the issue of full-weight-ed coins. But as soon as these new coins were intro-duced in circulation they disappeared. Sir Thomas Gresham, her financial adviser, noted and formulated this tendency and the law has since been named after him.

The law states that 'in every country where two kinds of legal money are in circulation, the bad money drives out good money.' By bad money is not meant only the debased, clipped and counterfeit coins but it refers to all money that is inferior or lower in intrinsic value as compared to good money. This tendency operates in the following ways :—

(1) In a mono-metallist country where good and bad coins of the same metal circulate as legal tender, the bad money tends to drive good money out of cir-culation. It is seen that the fresh coins which have full weight and, therefore, are good money are held back, and the old, worn-out and lighter coins or bad money are passed into circulation. This tendency can be verified from personal experience of the readers.

(2) Another instance of this Law is seen in a country where a depreciated paper currency is in use along with full-valued metallic currency. Obviously a depreciated paper currency is bad money as it cannot be converted into as many coins as are represented by its face value. Under the circumstances people will try to pass on depreciated notes into circulation and withhold metallic money as intrinsically it is more valuable. In these circumstances it is quite possible that there may come to rule two sets of prices in the market and more of paper currency may be required to purchase a commodity than metallic coins. There will be a premium or extra value attached to the coins.

(3) Another application of the Law is seen in a bi-metallist country. If of two coins of gold and silver current side by side one becomes over-valued or bad money, it will drive the under-valued or good money out of circulation. Suppose the ratio of exchange fixed by the currency authorities between gold and silver coins is 1 :16 while the same ratio is maintained in the market. Suppose the currency ratio is not altered though in the market one tola of gold becomes equal to 17 tolas of silver. Now, in the market one tola of silver is worth only one-seventeenth of a tola of gold in value, but if converted into a silver coin it comes to acquire one-sixteenth of the value of the gold coin. That is, the value of silver as a unit of currency is more than its value as a piece of metal and thus it is over-valued as currency and becomes bad money as against gold which is under-valued as currency and becomes good money. Here the tendency will come into operation. People will take a gold coin, melt it, exchange it in the market for 17 units of silver, take them to the mint and receive 17 silver coins, 16 of which will fetch a gold coin which will be thrown in the melting pot

once again. This process will bring some profit to the public and, therefore, gold coins will be driven out of currency.

How is the good money driven out?—Good coins are preferred to bad coins because they possess more intrinsic value than the bad ones. They will, therefore, be more profitably utilized for the purposes other than currency. They will be either (*i*) melted and used for the purposes of art as they contain more metal in them; or (*ii*) they will be *hoarded* or (*iii*) they will be *exported* for the same reason. In payment of foreign debts, a coin counts by weight and not by tale, and consequently a good coin will fetch higher value in such payments.

§ 15. **Limitations of the Law.**—The operation of this tendency is subject to the conditions noted below :—

(i) If a person's income is just sufficient to meet his expenditure and leaves him no margin for savings, it is no use for him to differentiate between good and bad coins as all the coins will be spent by him sooner or later. Similarly, if the total money, good and bad, in circulation is barely sufficient to meet the industrial and commercial requirements of a community, good and bad coins will circulate side by side.

(*ii*) Again, if in a mono-metallist country the unlimited legal tender is a token coin, as in India, its value in exchange will almost always be more than its intrinsic value. There is thus no temptation to withhold slightly heavier-weight coins. As a matter of fact, the distinction of good and bad money does not apply to rupee in the sense it applies to standard coins. If still people give preference to new coins over the old ones which they pass into circulation first, they are influenced only by greater brilliance of the new coins.

(*iii*) Lastly, if the bad coin has been excessively worn-out or debased or clipped or defaced or coun-

terfeited, people refuse to accept it and as a result it is this kind of bad money that is driven out of circulation and not the good one which is accepted on all hands.

§ 16. **Indian Currency System.**—The Indian currency consists of both *metallic* currency comprising coins of various denominations from the silver rupee down to the bronze pie and *paper* currency notes of value of Rs.10000/- to Rs.5/- convertible in terms of rupees for internal purposes. For financing the foreign trade of the country, the rupee has been linked to the sterling at the rate of 1*s*. 6*d*. and the Reserve Bank of India has been entrusted with the responsibility of maintaining this ratio within narrow limits of 1*s*. $5\frac{9}{16}$d. to 1s. $6\frac{3}{16}$ d.

The present system is the outcome of several changes and improvements made from time to time. Only a few salient features of the historical background are being noted here.

1-Metallic Currency.—Historical records and archaeological finds have established the claims of India having enjoyed gold and silver currency from ancient times though no uniformity of coinage seems to have been observed for any appreciable length of time. The old practice of commemorating the ascent to the throne, a victory over an enemy or annexation of a territory by striking a coin was observed right down to the later middle ages with the result that at the beginning of the 19th century there were about one thousand coins of different denominations, weight and fineness current in the country. This multiplicity and variety of coins without any uniform measure of value hampered trade and commerce and was prejudicial to the growth of India's prosperity.

In 1818 the East India Company improved matters by declaring the Company rupee, claiming its descent from the 'tanka' introduced by Iltutmash

in 1233, as the standard coin in Madras Presidency. Later on in 1835 it was made sole legal tender for the whole of British dominions in India. This rupee weighed 180 grains eleven-twelfths fine, that is, contained 165 grains of pure silver and 15 grains of alloy. The Indian mints were also thrown open to the free coinage of silver and India became a silver mono-metallist country.

But the mints had to be closed to the unrestricted coinage of silver in 1893 due to a rapid fall in the price of silver caused by heavy silver mining in America and discarding of silver as a money metal by some of the Central European countries. The standard rupee thus became a token coin. These coins began to be minted from 1900 and yielded seigniorage which was accumulated in a separate fund called the Gold Reserve Fund. The whole profit was invested in sterling securities in England. In 1906 this fund was renamed as the Gold Standard Reserve, hoping that it will form a nucleus of a gold currency to be introduced in India. During succeeding years the question of introducing gold coins in India was thoroughly discussed by experts and was declared closed as gold currency was found unsuited to the needs of the country. The funds in the Gold Standard Reserve were, therefore, absorbed in the London branch of the Paper Currency Reserve.

Coinage of today.—The peculiar position of Rupee in India is interesting. It is a token coin yet serves as a full-bodied or standard coin as along with the half-rupee it serves as an unlimited legal tender and the paper notes are convertible into rupees. It is assisted for small change by four-anna piece or quarter-rupee of both of silver and nickel, two-anna piece and one-anna piece of nickel, and pice, half-pice and pie made of bronze. The coinage of nickel coins was provided by the Act of 1906 and the one-

anna piece was introduced in the following year, but the two-anna nickel piece was put into circulation in 1917-18 and the four-anna and eight-anna nickel coins in 1919. The eight-anna piece was later on withdrawn from currency as it suffered in comparison with its silver counterpart and could not win the public approval.

The weight and fineness of the silver coins as maintained till 1940 are given below.

Coin	Total weight in grains	Fine silver grains	Alloy grains
Rupee ...	180	165	15
Half-rupee ...	90	82½	7½
Quarter-rupee or four anna-piece ...	45	41¼	3¾
Eighth of a rupee or two-anna-piece	22½	20⅝	1⅞

In view of the rapid absorption of rupee coin for hoarding the Government decided in 1940 that the fineness of one-half silver and one-half alloy should be adopted for a rupee, half-rupee and quarter-rupee silver coins. The rupee, therefore, is half-fine and now contains 90 grains of fine silver and 90 grains of alloy, the eight-anna and four-anna pieces containing proportionately a half and a quarter contents of silver and alloy of the rupee respectively. The two-anna silver piece has been withdrawn from circulation. The new silver coins have a security edge device consisting of a hollow edge groove in the centre of the milled edge which is considered to be a virtually absolute safeguard against counterfeiting.

On account of war activity the demand for small coin greatly increased, and in 1942 was taken up the

minting of a half-anna coin which is a square coin with rounded corners, light in weight and convenient to handle. In 1943 was issued a new design of pice having a small diameter and a circular hole in the centre, reduced in weight to 35 grains from the older pice of 75 grains. This was done to prevent hoarding of pice whose metallic value had gone up to make it worthwhile to hoard or melt it.

§ 2. **Paper Currency.**—Though some form of credit money like Hundis have been in vogue in India, paper currency was practically unknown before the advent of the British Rule. The three Presidency Banks of Bengal, Madras and Bombay were permitted to issue notes but because these notes never enjoyed prosperity, the privilege was withdrawn from them. After passing of the Paper Currency Act of 1861 the Government of India began to issue currency notes. The country was divided into seven currency circles with the currency offices located at Bombay, Madras, Calcutta, Cawnpore, Lahore, Karachi and Rangoon. Each office issued notes that were convertible into rupees only at the office of issue.

The currency notes issued were of the denomination of Rs.5, Rs.10, Rs.50, Rs.100, Rs.500, Rs.1000; Rs.5,000 and Rs.10,000. These were convertible notes, the Government undertaking to pay cash to the bearer on demand at the office of issue. Each note carries a promise on behalf of the Government of India for such an encashment. In the beginning the encashment facilities were offered only at the office at which a particular note was issued but later on began the process of universalization under which notes could be converted into cash at any office of issue at the wish and convenience of the holder. First, five-rupee notes were declared 'universal', they were followed by 10-rupee, 50-rupee, and 100-rupee notes respectively. Lately all notes except that of

the highest denomination can be converted anywhere in currency offices, offices of the Reserve Bank of India, branches of the Imperial Bank of India and the Government treasuries.

The rise in the volume of the paper currency in India has been remarkable and the process of universalization with prompt encashment has been mainly responsible in making the notes popular. The total circulation increased from Rs.7 crores in 1865 to 174 crores in 1920 and 255 crores in 1940. During the last Great War notes of the value of Rupee one and Rs.2-8-0 were also issued but were later on withdrawn, having served their purpose of meeting increased demand for currency during the war boom.

The one-rupee note again made its appearance in June 1940 but as a coin, a paper coin, and not as a currency note. Because it is a coin, the question of its convertibility does not arise; on the other hand, the notes of all denominations from Rs.5 to Rs.10,000 can be converted in terms of rupeenotes. Its reappearance was dictated by circumstances similar to those of the last War, i.e., to meet the increased trade and commercial requirements, and also to circumvent the embarrassing situation caused by serious hoarding of rupee coins by certain section of the public.

Since 1935 the issue and management of paper currency vests in the Reserve Bank of India in pursuance of the recommendations of the Hilton-Young Commission. The notes are issued by the Issue Department of the Bank which also maintains reserve to ensure prompt convertibility of paper currency and issues weekly reports of its liabilities and assets for general information in the form noted earlier.

Demonetisation of Currency Notes.—One of the evils resulting from heavy war time transactions was 'black market' and profiteering. The supply of goods being restricted and distributed under control system

by fixing the maximum prices and limiting the quantity saleable to purchasers, the articles were withdrawn from open market and sold to consumers secretly and at prices much higher than the ceiling fixed by the government. Such black market transactions brought enormous profits to businessman. There was also a strong suspicion that persons concerned in the supply and rationing of commodities and contract were not quite free from bribery and corruption. In order to bring such operations within the knowledge of the government and Taxing authorities in particular, the demonetisation scheme was introduced.

Saturday the 12th January 1946 was declared a bank holiday and banks and banking concerns were asked to submit the returns of their holdings of notes of Rs.500, Rs.1000 and Rs.10000. The following Sunday the Demonetization Ordinance was issued under which notes of Rs.500 and over ceased to be legal tender after 12-1-46. Monday the 14th January was again declared a bank holiday to prevent such notes being changed for notes of lower value at the banks. The banks were entitled to have their high notes exchanged for lower value notes at the Reserve Bank of India. The individual owners had to submit an application in triplicate on the prescribed form to their bank, treasury or Reserve Bank giving details of high denomination notes which they wanted to be exchanged. This privilege could be enjoyed for 14 days only after which the notes would be reduced to mere scraps of paper.

3. **Exchange Ration.**—India belongs to the sterling group of the countries, its currency having been linked to sterling in 1927 at the rate of a rupee equal to 1s. 6d. This system is called the sterling exchange standard.* Hardly any currency problem

---

* See "Monetary Standards," Section 13 above.

has exercised the public mind in India to the extent done by the ratio controversy. Started in 1926 after the appointment of the Hilton-Young .Commission the controversy does not lack enthusiasts even now, though the Government of India has unequivocally pinned its faith to 1s. 6d. ratio as against 1s. 4d. or any lower rate and from its point of view the matter is considered to be closed. The question whether there should be any exchange rate at all "pegged" to sterling is also sometimes raked but the consensus of opinion is in favour of a fixed ratio rather than a fluctuating one as a pegged exchange guarantees stability in the foreign trade of the country and obviates speculation from the budget of the Government of India.

EXERCISES

1. Define ' money ' and in the light of your definition discuss whether the following are money:—(i) pice, (ii) traveller's cheques, (iii) gold dust among gold miners, (iv) ration coupons with the labourers in a camp.

2. Enumerate the qualities that a money commodity should possess to be a good medium of exchange. Why have gold and silver been universally accepted as money metals?

3. Explain:—

" Money is a matter of functions four:

A medium, a measure, a standard, a store."

4. Classify money into different types and give three examples of each variety.

5. What profit does a counterfeiter make in making a rupee? What is the seigniorage on a five-rupee note? What gains or losses will accrue to the Indian Government or the public if the mints are declared open for the coinage of rupees of to-day?

6. Distinguish between:—(i) Debasement and Depreciation; (ii) Brassage and Seigniorage; (iii) Free and Gratuitous Coinage; and (iv) Standard Coins and Bullion.

7. Can we measure the value of money as we measure the price of other economic goods? Does the value of money also fluctuate? How?

8. Describe the effects of changing prices on different sections of population. Do you like rising prices or falling prices and why?

9. What are Index Numbers and what purposes do they serve? Give the precautions to be taken in preparing them.

10. Enumerate the advantages of paper currency over the metallic one. Can you give reasons why the paper currency is not so popular in India?

11. What is Gresham's Law. Explain how it operates.

12. What is the standard of value in India? How is the value of rupee for external purposes maintained?

13. Give an account of the Indian Currency System. Suggest improvements.

CHAPTER VIII

CREDIT

§ 1. **What is Credit?**—In a sale and purchase transaction, the act of exchange is completed as soon as the commodity is received by the purchaser and its price by the seller. The presence and help of ready money in completing this double transfer of money and commodity is indispensable, but sometimes a person has either no cash or too little of it to pay promptly for the commodity he desires to buy. The shopkeeper may accommodate the customer if in his past dealings he was either promptly paid for the articles sold or he received payment at a later date fixed for such a payment.

This *privilege or accommodation* permitted to the buyer to pay at some future date for the commodity received today, *is called credit.*

A *credit transaction* is a *protracted exchange* because it is not completed at the time the buyer receives the commodity from the seller; it is lengthened out or prolonged till the time when the seller receives full payment of the price from the buyer. A credit transaction differs, therefore, from the sale and purchase exchange in being *based upon the confidence of the customer* and in having *an element of time* in it. If *A* buys a gramophone from *B* and pays ready cash, *B* needs have nothing by way of confidence in *A's* honesty; the transaction is at the same time closed immediately. But if *B* allows *A* to pay Rs.25 for the gramophone in the course of 60 days, *B* allows him credit to the extent of Rs.25; and the sale and purchase of the gramophone will remain incomplete till 60 days later when B receives full payment of its price.

§ 2. **Credit Instruments.**—When a customer buys something on credit, usually he leaves with the seller a token or proof of the deal or a written promise to pay the sum at a future date. Such written promises to pay are termed *Instruments of Credit*. There are several types of credit instruments as Promissory Note, Cheque, Bill of Exchange, Hundi and Banker's Draft.

The simplest instrument of credit containing the buyer's promise to pay the seller a certain sum of money for value received after a period of time is a promissory note. Here is a specimen.

1. Promissory Note

Rs. 125/- Benares, February 25, 1946.

STAMP ANNAS THREE

Two months after date I promise to pay Messrs. Gramophone Stores, Benares, or order, the sum of rupees one hundred and twenty-five only for value received.

N. Singh

The expression 'for value received' proves that the promissory note has been made out in lieu of payment for a genuine transaction and that no force or fraud has been practised on Mr. N. Singh.

Promissory notes are written also by the borrowers of money in fovour of their creditors. Even the Government of our country, like almost every other government, raises funds on such promises to pay them back after a definite period of time.

2. Cheques

Another instrument of credit gaining greater popularity in modern times is a cheque. A cheque is a written *order* issued by a depositor to his bank to pay an amount of money specified therein to a person

whose name is entered on it. It is an unconditional order which the bank must obey if the depositor has enough money to his credit with the bank. The person who writes a cheque, is called the *Drawer;* the bank on whom the cheque is drawn is called the Drawee; and the person in whose favour the cheque is drawn, is called the *Payee.*

The payment for a cheque can be received on presenting it at the bank's counter and signing it as an evidence of having received payment. If it is a '*Bearer cheque,*' any person, whether he is the rightful payee or not, may receive payment. The bank cannot be held responsible for the payment to a wrong person in case of a bearer cheque. To make it an 'Order cheque' by striking the word 'bearer' and writing in the word 'order,' is a secure form of payment, as in this case the payee will have to furnish identification. The safest way is to cross a cheque by drawing two parallel lines across the face of it. No prompt cash payment can be made for it even if the payee presents it to the bank. Merely a transfer of the sum mentioned in the cheque will be made from the account of the drawer to that of the payee. If the payee wants to draw the money, he will be required to draw a fresh cheque, in his own name. Or he may "endorse" the cheque that is transfer the right to receive payment in favour of his creditor by writing on the back of it 'Pay to Mr. A. B. C.' and affixing his signature and the date.

The specimen of a cheque is given hereafter.

The section on the left is the counterfoil to be retained as a memorandum, while the section on the right is the cheque proper. Mr. Gopinath is the *drawer*, and the Benares Sub-agency of Allahabad Bank Limited is the *Drawee* with which Mr. Gopinath keeps an account, and the Oriental Life Assurance Company Limited is the *payee.* The cheque was

No. BC/2 41902

Dated *April 22, 1941*

In favour *of*

Oriental Life Assurance

Co. Ltd

Rs. *69-2-0*

No. BC/9 41902 Benares City *April 22, 1941*

ALLAHABAD BANK LIMITED

Benares Sub-agency

Pay to *Oriental Life Assurance Co. Ltd.* or beare

Rupees *Sixty-nine and annas two only*

Rs. *69-2-0*

CREDIT

Gopinath

457

originally printed as a 'bearer cheque,' but for the sake of safety it has been crossed with an ordinary crossing by writing the words '& Co.' between the parallel lines.

Nature of a Cheque.—A cheque is more of the nature of a cash payment than other credit instruments. If a cheque is drawn on real deposits that exist and accepted by the payee, in ordinary course the transaction has come to an end. The exchange will be regarded as incomplete only when (for one reason or the other) the cheque is dishonoured because there is not enough money in the account of the drawer to pay for the cheque. Nevertheless the success of a cheque as a medium of exchange is based upon the confidence which the payee has in the honesty of the drawer. And there is an element of time, howsoever short, between the transference of a commodity and the transference of its price in legal currency. The cheque drawn by a person of sound means and high reputation in the market is as good as money, but it is *not money* after all, and there lies the element of confidence and the element of time which intervenes before the payee gets it encashed at the bank.

3. Bill of Exchange

A promissory note or a cheque is used both for personal and commercial transactions; a bill of exchange is used for commercial purposes only. It is a written request made by *A* to *B* to pay a certain sum of money to *C*. Generally *B* is a debtor to *A* and *A* a debtor to *C* and both these debts can be cancelled by one payment by *B* to *C* provided the indebtedness in each instance is to the same extent.

If *B* owes *A* Rs. 1,000 in payment of goods bought from him and has been allowed a month's time in which to make payment, while *A* owes the

same amount to *C* from whom he has bought goods on one month's credit, *A* will draw a bill of exchange on *B* to the value of Rs. 1,000 to be paid to C one month after he gets this written request. In this case the bill will read like this :

Bill of Exchange

Rs. 1.000/-

Allahabad
March 24, 1946

Stamp
-/15/-

One month after date pay to Mr C. or order the sum of rupees one thousand for value received.

Accepted. Payable at the Imperial Bank of India, Benares Branch.

Sd. B.

To Mr. B.

Sd. A.

Mr. *A*, who draws the bill, is the drawer or the maker of the bill; *B*, on whom it is drawn, is the drawee; and *C*, in whose favour it is drawn, is the payee. After properly drawing the bill, *A* will send it to *C* who will present it to *B* for *acceptance*. If *B* has no objection to paying the amount to *C*, as he will have none in this case, he will write the word "accepted" on the space provided for between the lines drawn across the face of the bill. As he has an account with the Imperial Bank of India, he will like C to receive payment at the Benares branch of that bank.

Time Bills and Sight Bills.—That kind of bill which allows a period of time after which the drawee is expected to make the payment is called a *time bill*. A bill may be drawn to be paid for on presentation. Such a bill is called a *Sight Bill*. It is drawn exactly as the time bill except that in place of the expression 'one month after date' will be substituted the words 'on sight' or 'on presentation.'

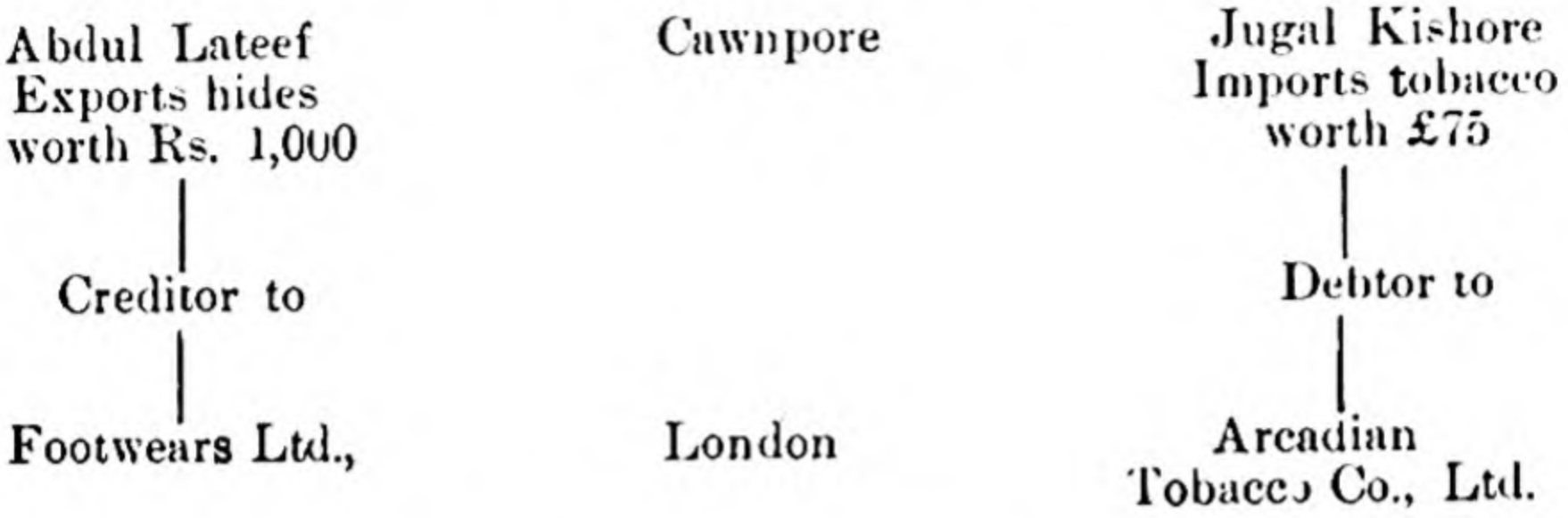
Every bill has to be *presented* to the drawee for *acceptance or giving his consent to its payment*. Un-

less the bill has been accepted it cannot become valid. This Bill is a *time bill* as one month's time is allowed to *B* at the end of which period he must pay. As a matter of fact the customary 3 days of grace will be allowed in addition to the time mentioned on the bill. This time is to be calculated from the date the bill has been presented to *B* and accepted by him.

On being accepted, a bill becomes a *Negotiable Instrument* which can be used in payment of debt or can be discounted. *C* will receive payment after a month and three days; but if he wants money today, he may take it to a bank, probably his own bank, and have it discounted there, *i.e.*, get its present value, after one month and three days' interest at the market rate has been deducted, from the sum. Here *the bill not only clears* two debts, of *B* to *A* and of *A* to *C*, *it becomes an investment* to the bank and a convenient source of getting ready money to *C*.

A bill of exchange serves as a means of payment, not only among persons residing in the same country, but also among persons belonging to different countries. In the latter case the service rendered by a bill—Foreign Bill of Exchange as it is called—is greater, cheaper and more expedient. Payments of debts to persons belonging to the same country can be made by other means too, like sending money-orders or under insured covers but such means are either costly or inconvenient when payments have to be made to a foreigner in his own country. Postal rates are much higher for foreign remittances. At the same time a foreigner requiring payment of his dues in the currency of his own country cannot be paid by his debtor who uses a totally different currency. A foreign bill of exchange is the best means of payment in such cases.

How a Foreign Bill of Exchange Works



Abdul Lateef of Cawnpore exports hides worth Rs. 1,000 to Footwears Ltd. of London, who are, therefore, debtors to Abdul Lateef. Jugal Kishore of Cawnpore imports tobacco worth £75 from Arcadian Tobacco Company of London and is debtor to them to that extent. (As the present rate of exchange £75 is equal to Rs. 1,000.) Abdul Lateef will draw a bill of exchange on Footwears Ltd. for Rs. 1,000 either in his favour or he may draw it in favour of Jugal Kishore if the latter requests Abdul Lateef to sell him a bill of exchange on some firm in London as he himself has to make payment to Arcadian Tobacco Co. of that city. The bill will be a timebill of probably 60 days or 90 days. It will be sent to Footwears Ltd. if it is drawn by Abdul Lateef in his own favour and received back after it has been duly accepted. Abdul Lateef will most probably have it discounted with some bank at Cawnpore and get its present worth in cash. The bank will probably sell it to somebody else or wait till the date of maturity and receive payment from the drawee through some of its correspondent in London.

If it was drawn in favour of Jugal Kishore at his request, that is usually the course adopted by Indian merchants in buying bills, Jugal Kishore will make payments to Abdul Lateef—it being its dis-

counted value—and having endorsed the bill in favour of his creditors, Arcadian Tobacco Co. will send it to them. They will present it to Foot-wears Ltd. for acceptance, and then either have it discounted at a bank in London, or wait till its maturity for payment which will be made by Footwears Limited.

Thus Abdul Lateef gets payment in Indian currency from Jugal Kishore instead of from Foot-wears Ltd., and the Arcadian Tobacco Company gets payment in English currency from Footwears Ltd., instead of from Jugal Kishore. Both the debts have been paid by one bill of exchange. There was no need to send gold from London to Cawnpore and from Cawnpore to London. Thus the use of money has been economised. And the payment of debts has been completed at the lowest possible cost of sending a letter from Jugal Kishore to Arcadian Tobacco Co.

4. Hundi

An inland bill of exchange in India is called a Hundi. The Hundi system has been popular among Indian merchants for ages and the establishment of commercial banks has further facilitated its use. Its functions are the same as those of a foreign bill of exchange, but it is used for the remittance of money for the payment of claims to persons or firms residing in India alone. Below is given in Roman characters the popular form of a Hundi.

Nnmber 17

Swasti Shree Ajmer Shubhsthane Shree bhai Mohan Lal Balmukund yatha yogya jog likhi Gorakhpur seti Ramnath Shyamnath ka Jai Gopal banchne. Age hundi qita ek ap uper kiya rupayya 400 char sau ka adha rupayya 200—do sau—ka doona dena. Yahan rakkha bhai Ram Kumar Sitaram pas. Pahunchne ke sath nam shaha jog rupayya hundi patay chalan chaukas karke dena.

Miti Paush Sudi Dashmi. Sambat 2002.

Hastakshar

Ramnath Shyamnath

5. Banker's Draft.

It is a bill of exchange drawn by a bank upon some other bank or its own branch at a different place whether inland or in a foreign country. If Balmakund of Agra has to send money to Chandrabhan of Lucknow and does not want to bother about buying a hundi, he may go to a bank, make payment of the money he wants to remit and a little commission to the bank, and get a banker's draft. It will be drawn by the bank at Agra on its branch or some other bank at Lucknow, with which it has dealings, in favour of Chandrabhan. Balmakund will send it to Chandrabhan who will get the sum of money specified in the draft on presenting it to the local bank. Banker's drafts are generally sight drafts intended to make prompt payment.

A specimen is given below.

No. 16256 Agra *April 27,* 1941

CENTRAL BANK OF INDIA LIMITED

Rs. 500/-

Pay to *Mr. Chandralhan* or order

Rupees *Five hundred only*

.....and place

the same to account of the Central Bank Limited.

To, The Sub-agent
Central Bank Ltd.
Aminabad, Lucknow

For the
Central Bank Limited
Sd. K. L. M.

Under Rupees Five Hundred and One.

The draft is drawn by the Central Bank Limited on its own branch at Lucknow. The expression 'under Rs. five hundred and one' is intended to safe-guard against the payment of any sum in excess of Rs. 500.

§ 3. **Uses of Credit.**—(*i*) Credit economizes the use of metallic currency. Credit instruments are substitutes for currency, and the greater the extent to which they are used, the greater is the economy in the use of currency. It is a cheaper and more convenient form of currency than the metallic legal tender. (*ii*) Credit finances trade and industry which would otherwise remain undeveloped, by providing businessmen huge loans at low rate of interest. (*iii*) Credit increases the productivity of capital. Idle or petty savings are collected by banks and passed on to capable businessmen to be profitably employed. (*iv*) Though capital is the basis of credit

and, therefore, credit cannot create or increase capital, yet credit does increase the productivity of capital by multiplying its use manifold. A bank on the basis of deposits worth Rs.100/- can advance credit to the tune of Rs. 1,000/- thereby helping capital to perform enormous services for the time being. (*v*) Credit is indispensable for international trade and commerce as payments for goods imported and exported can be easily and cheaply made by means of bills of exchange.

§ 4. **Banks.**—

Functions of a Bank.—Banks are the institutions of credit. Their main function is the creation of credit by borrowing and lending, and its productive utilization. In modern industrial production the need of capital is great, so great that a producer on a large scale will usually depend upon borrowed capital to run his business. The bank can provide him the required some of money in one place and save him the trouble of approaching individual lenders. This service bank is able to render because it borrows money from big and small lenders, collects it into huge amounts, and out of them lends to its clients.

Borrowing by a Bank

A bank borrows by a way of receiving deposits which are of three types.

Fixed Deposits.—Sometimes a bank receives deposits on the understanding that they will not be withdrawn for a certain length of time, say, for 3, 6, 9, or 12 months or for even longer periods. These deposits are called *Fixed Deposits* or *Time Deposits.*

Current Deposits.—Money can be deposited under *Current Accounts* on which the depositor can draw any time without giving any notice to the bank. This privilege is not enjoyed in fixed deposits which

may not be withdrawn before the expiry of the period for which the money was originally deposited.

Savings Bank Deposits are meant for the poorer clients to encourage them to save their little bit and earn some interest on that. The right to withdraw from savings accounts is allowed once or twice a week though there is no limit to the number of times a person may deposit fresh sums of money in his account.

Interest is allowed to the depositors on the fixed deposits and savings deposits as the bank can lend a portion of these to its borrowers and earn interest. A very small percentage of current accounts can be so invested and therefore banks usually allow no interest on current deposits.

Lending by a Bank.—The above deposits and share capital provide money to the banks which invest it in government paper or lend to commercial houses. Advances are made on the security of commercial paper, bonds, stocks, shares, jewellery and goods, property and personal surety of men of means and credit in the market. Interest is charged on these loans which forms the main source of income to the banks. Bills of exchange and hundis are also "discounted" and they provide a common and profitable means of income to them. In lending money a bank only permits the borrower to draw cheques on it up to the amount of the loan agreed upon, and unlike private creditors, it does not hand over money to him. As cheques drawn are often returned by the payees to the banks for being credited to their accounts, a bank adjusts accounts by book transfers. It can thus lend several times the amount of currency money it uses as working capital. In India where cheque system is not so developed, a bank can lend about 4 to 5 times its cash against 10 times in England and U.S.A.

In addition to lending of money, a bank performs several other functions. It supplies inland and foreign *means of remittance of money* by issuing banker's drafts and accepting bills of exchange. A bank will act as a *trustee* or *an executor of wills and decrees* on commission. It undertakes the *safe custody* of valuable papers, jewels and ornaments, and charges remuneration for this service. A bank may *issue currency* and act as an agent of the government like the Reserve Bank of India in this country.

The services of the banks are not confined to creating of credits and leading to a more profitable use of money only; they also help in *economizing the use of money* to a great extent by introducing the cheque system. Money is kept with the banks and when cheques are drawn against it, no money actually passes from the hand of the drawer to that of the payee. Only a book transfer is made from the account of the former to that of the latter. This economy can be multiplied if the cheques are endorsed. The greater the number of endorsements, the greater is the number of payments that can be made by one cheque, and the greater is the economy in the use of money.

EXERCISES

1. Give the meaning of 'credit' and an 'instrument' of credit. Explain the working of two of such instruments.
2. What is a Bill of Exchange and how does it differ from a hundi and a cheque? Why should it be so popular when other means of payment are available to people?
3. Credit creates currency. Credit economizes currency. With which of the above statements do you agree? Show that credit is the foundation of economic development of a country.
4. What different methods are available to you in making payment to a person residing in a distant city in India? Which one will you prefer and why?
5. Enumerate the functions of a bank. Estimate its services as an institution of credit.

CHAPTER IX

BANKING IN INDIA

§ 1. **Types of Banks in India.**—The banking organizations of our country can be divided into two groups: those financing commerce and industry of the towns and cities, and those that finance agriculture and small-scale industries of the villages. The first group includes (*i*) Commercial or Joint-Stock Banks, (*ii*) Exchange Banks, (*iii*) Industrial Banks, (*iv*) The Reserve Bank of India which is in a class by itself, and (*v*) Shroffs. The second group consists of (*i*) Cooperative Credit Sccieties, (*ii*) Land Mortgage Banks, and (*iii*) Mahajans and Sahukars.

A Commercial Finance

§ 2. **Commercial or Joint-Stock Banks.**—Though a beginning in the western type of banking was made in 1806 by the establishment of the Bank of Bengal, followed later on by the other two Presidency Banks of Bombay and Madras, a really satisfactory start was not made till 1906. Due to rapid growth in the economic development of the country since then, the scope for banking in India increased and the banks showed astonishing progress which continues even now, though there was a temporary setback in 1923.

Indian Joint-Stock Banks

(In Lakhs of Rupees)

Year	Capital	Reserve	Deposits
1872	14	2	27
1906	133	56	1155
1930	825	530	10073
1943	1867	780	33899

Out of the present 35 Joint-Stock Banks, the six most important ones are the Allahabad Bank Limited, the Central Bank of India Ltd., the Punjab National Bank Ltd., the Bank of India Ltd., the Hindustan Commercial Bank Ltd., and the Bharat Bank Ltd., which together possess more than half of the working capital and three-fourths of the total deposits enjoyed by all the Indian Joint Stock Banks.*

§ 3. **Exchange Banks.**—The establishment of exchange banks and their growth in India is linked with the expansion of India's foreign trade. Early exchange banks opening their branches here were the English banks as England enjoyed predominant position in our foreign trade. With the advent of other foreign countries into India's international trade relations, their principal exchange banks also opened heir branches. Originally these banks confined their business to financing of India's foreign trade by Purchasing and discounting foreign bills of exchange. But recently most of them have begun to make an increasing part in attracting Indian deposits and financing internal trade as well at the places where their branches are situated. In this respect they are proving dangerous competitors and are checking the development of purely Indian banks. The 18 exchange banks, of which the more important ones are Lloyd's Bank, National City Bank of New York, P. and O. Banking Corporation, and National Bank of India, have extended their business to the extent of securing almost equal deposits with Indian banks. These in 1943 amounted to Rs. 14019 lakhs as against Rs. 33899 of those of the Commercial Banks. In 1936 an Indian-owned and

---

* For functions of the Commercial Banks, see the preceding chapter.

managed Central Exchange Bank of India was started in London as a pioneer to Indian banks in this line but it could not exist longer than a couple of years and has since been merged in the Westminster Bank of England. Foreign exchange business is a risky one and requires huge resources and efficient training. The Indian enterprise seems to have overlooked this side of banking, though it would be in the fitness of things that Indian banks should participate in financing the country's external trade in addition to controlling the finance of her internal trade and commerce.

§ 4. **Industrial Banks.**—These receive fixed deposits for long period and lend money to industrialists for long period to enable them to construct buildings and purchase machinery. They also *underwrite* the shares and debentures issued by such concerns and thus provide them with working capital. This service of underwriting consists in lendig the bank's name to a loan floated or shares issued by a company with an undertaking to purchase that portion of the issued capital which remains unsubscribed by the public. Commercial banks cannot extend loans for longer than 6 months to industrialists as they do not receive deposits for long periods and, therefore, for industrial expansion of the country the industrial banks are essential. But unfortunately there is no substantial industrial bank working in India. The Tata Industrial Bank, among a few, floated some time back, did some business for 5 years but was ultimately wound up and merged in the Central Bank of India in 1923.

The U.P. Industrial Finance Committee under the chairmanship of the late Sir Pochkhanwala recommended in their report in 1935 the establishment of (*a*) the U. P. Industrial Credit Bank Limited with a capital of Rs. 25 lakhs in order to advance loans to

major and minor industries for the purchase of raw materials and machinery and (*b*) the establishment of the U. P. Products Financing and Marketing Co. for assistance in the disposal of the finished products of specially minor and village industries. In pursuance of these recommendations has been started the U.P. Industrial Financing Corporation with a capital of Rs. 10 lakhs. It has a board of seven directors three of whom are the U.P. Government nominees. Its object is to extend financial aid to industries struggling for their existence and also encourage the floating of fresh industrial enterprises in the provinces.

§ 5. **The Reserve Bank of India.**—The need for a central banking institution had long been felt in India to develop the currency and credit structure of the country on national lines and regulate them according to the needs of her commerce and industry, in addition to regulating foreign exchange and supply easy credit to agriculture. With a view to achieve these objects and also as the fulfilment of a preliminary condition to the establishment of Federation in India, a bill instituting the Reserve Bank of India was passed in 1934. The Bank actually came into existence on April 1, 1935 and began functioning on July 4, of the same year.

§ 6. **Constitution and Management of the Bank.**—It is a joint stock bank with a share capital of Rs. 5 crores divided into 5 lakhs of shares of 100 each fully paid up. The general superintendence and direction of business are entrusted to a Central Board of Directors constituted of (*i*) a Governor and two Deputy Governors appointed by the Governor-General-in-Council, (*ii*) four directors nominated by the same authority, (*iii*) eight directors elected on behalf of the share holders, and (*iv*) one Government official nominated by the Governor-General-in-Coun-

cil. Thus the management of the Bank is shared by the Government of India and the public. Each of the five areas of Bombay, Madras, Calcutta, Delhi and Rangoon have a Local Board consisting of five members elected by the shareholders from among themselves and not more than three members nominated by the Central Board from that very area. The Local Boards advise the Central Board on special matters and perform such duties as are delegated to them.

§ 7. **Functions of the Bank.**—(1) It is the *Government Bank*. (a) It accepts money on deposits without interest from and collects money on behalf of the Secretary of State in Council, the Governor-General-in-Council, Local Governments, States in India, and Local authorities. (b) It acts as an agent of Government for all kinds of banking business and manages the public debt, *i.e.*, its floatation, payment of interest thereon and redemption thereof.

(2) *It is the Bank of Issue.*—It is at present issuing the notes of Government of India supplied to it by the Governor-General-in-Council, but it will soon issue its own notes. It will be the only bank enjoying the privilege of note-issue, and shall maintain reserve to ensure their convertibility. It shall publish every week the report of the Issue Department which will be maintained independently of the Banking Department.

(3) To maintain the stability of foreign exchange value of Indian rupee, the bank shall *sell sterling* on London in amounts of not less than £10,000 at a rate not below 1sh. 5 49/64d. for a rupee and shall also *buy sterling* worth not less than £10,000 at a rate not higher than 1sh. 6 $\frac{3}{32}$ d. for a rupee. Thus the exchange value of rupee will not be permitted to vary beyond these limits.

(4) *It is the Bankers' Bank.*—It will not be a

competitor of the banks of the country but will act as their guide, friend and philosopher by tendering them expert advice, coming to their help in times of financial crisis and generally coordinating and regulating their policies.

(*i*) Each Schedule Bank—bank having paid-up capital and reserves of aggregate value of Rs. 5 lakhs and over—shall maintain a reserve with this Bank of at least 5% of its demand liabilities and 2% of time liabilities. Such banks shall also furnish weekly statements of ther liabilities to this Bank for its information.

(*ii*) It acts as the bank of re-discount, and the banks can borrow money from it on the security of Government paper, stocks and shares, hundis, bills of exchange, and gold coin and bullion.

(iii) It acts as a 'clearing house' or 'clearing bank' for all other banks. Each member bank keeps an account with the clearing bank and day-to-day mutual indebtedness of the banks arising out of cheques and bills drawn upon them by each other, is cancelled. This clearing service is a great economiser of money as the inter-bank debt is paid by mere book entries in the Reserve Bank's accounts without any money actually passing from bank to bank. An idea of the extent of clearing business may be judged from the fact that cheques worth Rs. 50,64,91,00,000 were cleared during the year 1944 in the clearing houses of Calcutta, Bombay, Madras, Colombo and Karachi alone.

5. *Agricultural Credit Department.*—The Bank was expected to create a special Agricultural Credit Department (i) to maintain an expert staff to study all questions on agricultural credit from every available source; and (*ii*) to co-ordinate the operations of the Bank in connection with agricultural credit and its relations with provincial co-operative banks and

other banks or organizations engaged in the business of agricultural credit. Mr. M. L. Darling, I.C.S,; who was entrusted with the task of inevestigating the ways and means that the Bank could adopt in implementing its above responsibility, submitted his report in 1935. In 1937 the Bank in a statement pointed out that it could take only a limited interest in the development of rural credit and that too when the past debts of the cultivators be reduced within their means of payment and the cooperative movement be rehabilitated by discouraging long-term agricultural finance. Then the Bank will be prepared to recognise a licensed money-lender as a signatory in the two name papers that could be submitted by the scheduled banks for discounting with it. This offer of assistance is much below what the Bank can do in promoting cheap rural credit without shouldering any undue risks.

6. *Forbidden Business.*—The Bank is forbidden to undertake certain types of business to avoid unnecessary risks and to maintain its status as the premier bank of the country.

(*i*) It cannot engage in trade or otherwise have a direct interest in any commercial, industrial or other undertaking.

(*ii*) It shall not purchase its own shares or shares to any other bank or company or grant loans on the security of any such shares.

(*iii*) It shall not advance money on mortgage of immovable property.

(*iv*) It may not make advances or loans.

(*v*) It may not draw or accept bills payable otherwise than on demand.

(*vi*) It will not allow interest on deposits or current accounts.

§ 8. **Agreement with the Imperial Bank of India.**—In view of only a few offices of the Reserve

Bank having been opened, an agreement has been made with the Imperial Bank of India according to which the Imperial Bank will act for 15 years in the first instance as the sole agent of the Reserve Bank at all its branches and will receive remuneration at the rate of 1/16 rupees per cent on business done up to Rs. 250 crores and 1/32 per cent on excess thereof. It will be paid during this period Rs. 95 lakhs for maintaining its branches wherever they existed at the commencement of the agreement to run the Reserve Bank business. (The Imperial Bank of India thus ceases to be the Government bank, the position it held since its inception in 1921. It, of course, is the biggest commercial bank constituted in India, with 14 years' experience of commercial and Government business and now the additional prestige of acting as the Reserve Bank's agent on highly remunerative terms.)

B. Agricultural Finance

1. *Co-operative Societies*

In spite of the recent industrial development of the country, agriculture still forms the mainstay of Indian population. It is the biggest primary industry in the country, while at the same time it supports the transports and several manufacturing industries. The successful financing of agriculture, therefore, is a problem on the solution of which the economic progress and prosperity of the entire country-depends.

§ 9. **Cooperative Societies.**—The introduction of the Cooperative movement under the Co-operative Societies' Act of 1904, and as amended in 1912, has proved a great boon to agricultural finance. Though primarily intended to supply easy and cheap credit to farmers, it has come to embrace various other

productive, distributive and social activities in our village and town life.

What is Co-operation?

It is difficult to give a comprehensive definition of Co-operation with all the principles and salient features of the movement. In the economic sense it has been defined as an organization of the isolated and powerless individuals who wish to reap the material advantages enjoyed by the rich and powerful persons by mutual help and moral support. It is an association of the weak formed on the basis of equality and democracy and directed to the promotion of common economic interest whether in the field of production, consumption, sale, or supply of credit.

§ 10. **Aim.**—The aim of cooperation is the reduction of competition and elimination of middlemen by emphasizing the principle of *each for all and all for each*, and it helps the members to secure "better bussiness, better farming and better living."

§ 11. **Principles of Cooperation.**—They are simple and sound. (1) *Knowledge* and *confidence* are the keynote of co-operation. All the members should intimately know, and have complete faith and the honesty and business morality of, one another. With this end in view it is essential that the members should belong to the same town or village or group of villages, and to the same caste, class or tribe. The minimum number of members is ten.

2. *Indentity of Interests.*—It is, therefore, provided that four-fifths of members of rural societies should be agriculturists and the same percentage shoud be non-agriculturists in case of urban societies. Thus the members are expected to have common interests and common aspirations and avoid conflict in the smooth working of the society.

3. *Democracy.*—The management of the society is *honorary* and *democratic.* No office-bearer receives remuneration for services sendered to the society, while the society is run on democratic lines. Every member has one vote irrespective of the member of shares held by him. There is a General Committee consisting of all the share-holders and a Managing Committee or Panchayat of five or seven members elected by the General Committee. Decisions are carried by a majority vote.

4. *Unlimited Liability.*—The liability is unlimited for the rural societies of the Raiffeisen type. By unlimited liability is meant that in case of default by a borrowing member the other members that stand surety for him, are liable to make up the loss of the society even if they have to pay from their personal property to any extent without limit, whatever may be the number of shares held by them.

5. *Economic Independence.*—The entire profits of rural societies are credited to the reserve fund, but in case of urban societies where distribution of profits among the share-holders is permitted, the minimum of 25% of the profits of the year must be added to the reserve fund. This gradual building up of the reserve makes the society financially sound and independent of outside loans and ultimately enables it to lend to its own members at a lower rate of interest.

6. *Social Service.*—It has been pointed above that the members are guided by the motive of mutual help and social service and, therefore, perform duties gratis. At the same time the societies have been empowered to give away 10% of profits for education, sanitation and other charitable institutions of the locality.

TYPES OF SOCIETIES

- Co-operative Societies
  - Primary
    - Credit
      - Agricultural
      - Non-agricultural
    - Non-Credit
      - Agricultural
      - Non-agricultural
  - Central—., *i.e.* Unions, Provincial and Dist. Banks

Primary societies are those that are constituted by members whether agriculturists or non-agriculturists, and deal with them direct; while Central Societies have as members, and deal with, the primary societies and not with individual members of such societies. The Credit Societies are meant to provide easy and cheap credit to the agriculturists or non-agriculturists whoever be their members. The non-credit societies help to solve problems other than of credit, as those of irrigation, fencing, cattle insurance, consolidation of holdings, dairying, supply of tools and instruments, and also marketing of the produce, in case of agriculturists and encouraging thrift, life insurance, provision of houses, supply of tools and instruments and others in case of non-agriculturists.

§ 12. **Working Capital.**—The working capital is accumulated in a number of ways:

(*i*) A small entrance fee of Re.1/- is levied on each member.

(*ii*) *Share-capital*—Members have to purchase shares the price of which they pay in small instalments of usually one rupee per share payable every six months.

(*iii*) Savings of the members are received as *deposits*, though this source contributes only petty sums in the beginning.

(iv) Deposits and *loans from non-members*, and

from Central and District societies are the main source of the supply of working capital.

(v) Reserve fund of the societies, in course of time, forms an important part of their capital.

§ 13. **Loans to Members.**—Loans are granted to members only for *short* and *intermediate* terms, and mostly for productive purposes. They are advanced.

(*i*) to meet current expenditure like buying of seeds and implements, and that on agricultural operations like ploughing, weeding and reaping;

(*ii*) to introduce ordinary improvements as deep ploughing, levelling, drainage, irrigation, installing, pumping plants etc.,

(*iii*) to maintain the farmer and his family and livestock in times of need; and

(*iv*) to pay rents and revenue. Unproductive loans are rarely granted and then in small quantity only.

The societies cannot afford to grant long-term loans for permanent or semi-permanent improvements like purchase of land, acquisition of costly equipment, etc., as they do not possess their own capital nor receive loans or deposits for long periods. It has been recommended that such long term loans should be granted by Land Mortgage Banks only.

§ 14. **Progress of the Movement.**—Progress of the Co-operative Movement has been rapid considering the short period during which it has been tried, and that in spite of the attitude of indifference adopted by the public in general. Though the start was made in 1906, the real expansion of the movement began in 1912 and its satisfactory growth is shown by the summary given below. Averaging at 1926 societies of all kinds in 1906—10, the number increased to 11786 during 1910—14 and to 146160 in

1942-43. The membership of primary societies in the same period increased from 1,61,910 to 6912004. Taking the average family to consist of 5 members, it is safe to assume that co-operation has entered the lives of over $3\frac{1}{2}$ crores of people in India.

Extent of the credit work done by all types of societies.

1942-43	In lakhs of rupees
Working Capital :—	
Share Capital paid up	1571
Loans and Deposits from all sources ...	8151
Reserve and other funds	1992
TOTAL ...	11714
Loans made during the year :—	
To individuals	3298
To Banks and Societies	2841
TOTAL ...	6139
Profits of all societies	220

§ 15. **Benefits of Co-operative Movement.**—*Economic.*—It is no mean achievement to have accumulated share value and reserve fund to the tune of Rs.35.6 crores. If account is taken of deposits from non-members, members and societies, and banks, the balance at the end of 1942-3 amounted to well over 117 crores of rupees. The societies were able to show a *profit* of Rs. 2·2 crores and the savings to the members on Rs.33 crores of loan received from the societies on *lower rates* must have been at least as much. They have provided opportunities for *profitable investment* to members and non-members alike. With the help of the society money, many farmers were *liberated from the usurer's yoke* and once again established on the basis of solvency. As agriculture has been made profitable by co-operation, migration

of the cultivators to the industrial towns has been checked and the country-side has been *saved from de-population*.

Educative.—A general rise in the intellectual level among the members has been achieved through their frequent association in committees and day-to-day activities. It has quickened the interest of the farmers, sharpened their intellect and awakened in them the sense of responsibility and business understanding. Literacy has been encouraged as it is essential in keeping the accounts and making and reading the entries made in the pass-books.

Moral.—The moral standard of the village life has been appreciably raised. Self-reliance, self-respect, discipline and thrift have been ingrained in the characters of members with the result that the bonds of rural life are strengthened. The spirit of 'each for all and all for each' has pervaded the co-operating communities and consequently there is a better understanding, greater mutual assistance, and less litigation among them. It has also reclaimed persons of loose morals and addicted to drink and gambling as such delinquents are forced to mend their ways if they want to join a society.

Social and Democratic.—The expenditure of a percentage of profits on education and sanitation has been pointed out before. In addition litigation and extravagance on ceremonial occasions has been appreciably diminished. The democratic management of the societies has initiated the members to the art of Government by representatives and the use of voting power and thus led to an improvement of their corporate life.

The above discussion is not intended to convey the impression that the co-operative movement has transformed the village life from one of poverty and misery to that of prosperity and happiness. The

movement was initiated to protect the peasant from the ever-menacing curse of indebtedness, yet merely the fringe of the question has been touched. On an average only 19·9 per 1,000 inhabitants of the country have definitely adopted co-operative activities, and there are no more than 42 societies per 1,00,000 inhabitants in the country.

§ 16. **Drawbacks of Co-operation.**—(*i*) One of the reasons of this slow progress is the attitude of the ignorant villager who considers the society as the Government bank and hesitates to join lest he should suffer somehow. And for this perhaps too much official association with the movement is responsible. (*ii*) In cases of unavoidable default to pay the society's debts a member receives rather a harsh and prompt punishment. Such a course is necessary for the solvency of the society but it acts as a deterrent to an individual to join it in preference to borrowing from a private moneylender whom he can at times refuse to pay. (*iii*) The liability is unlimited, and the faithful members consider it unnecessary to shoulder heavy risks for the sake of the defaulters and irresponsible members. (*iv*) Substantial loans payable in easy instalments over a long period are required by the farmers to pay back their old debts, or to introduce permanent improvements in the land. The Cooperative society is unable to meet this requirement. They are, therefore, compelled to depend on the village moneylenders. This divided allegiance to the society and the private agencies is highly injurious to the growth of the movement. (*v*) There is lack of true co-operative spirit and knowledge of the essentials of rural credit. The members look upon the societies as a mere source of credit and do not seem to take any interest in them after their need of money has been fulfilled by the society. (*vi*) Societies suffer due to excessive unrealized dues;

while audit is also defective. This has led to the closure of many a credit society.

§ 17. **Suggestions.**—The introduction of wide-spread education in rural areas with special emphasis on co-operative movement will remove the villager's ignorance and kindle interest in cooperative activity. A greater co-ordination between the commercial banks in the towns and rural societies will remove the inelasticity, inadequacy and dilatoriness of co-operative finance. A more courageous and progressive policy of rural credit should be followed by the Agricultural Credit Department of the Reserve Bank of India. It will infuse new life in the cooperative movement and help the establishment of the societies on solid financial foundations. Too much emphasis on credit side of the movement should be discouraged and production and sale of commodities and better living societies should be encouraged to a greater extent to improve the general economic conditions and outlook of life. That is to say, co-operation should be loked upon *not as a source of cheap credit alone; it must be treated as a mode of life* permeating village society in all its aspects, economic, moral and social.

2. Land Mortgage Banks

The short and intermediate loans to meet the current outgoings can be supplied by the primary co-operative societies, but the provision of the long-term loans can be possible through the agency of the Land Mortgage Bank alone. Among the objects for which these banks advance loans are the redemption of old debts, improvement of land and method of cultivation, and the purchase of land in special cases. In India we have *two tupes* of such banks: *purely Co-operative* type constituted by borrower-members like the one at Saidpur (District Ghazipur),

and the *Semi-cooperative type* counting among its members both the borrowers and the non-borrowers. The co-operative land mortgage society, the first type, cannot work on a large scale as its working capital is inadequate, membership small, and liability, in some cases, unlimited. The quasi-co-operative type is able to attract big loans and deposits from non-borrowing members and also from the sale of debentures which are issued on the security of land of the members. If these debentures bear a guarantee from the provincial government as in the Punjab, they bring in ample capital. These banks not only enable the cultivators to redeem their past debts, but also make the adoption of improved method of farming possible.

The lead was given by the Punjab where the first land mortgage bank was started at Jhang in 1920, but now there are 12 such banks. In India the total number of land mortgage banks and societies is 252 of which Bombay has 18 such banks recently started; Bengal 5; Assam 5; the U.P. 7; while Madras claims 119 primary land mortgage societies and 1 central land mortgage bank. Obviously the number is small, and we think that greater attention should be paid to the multiplication of these banks to the lasting good of the country-side.

3. Indigenous Banking

In the class of indigenous bankers are included the shroffs, mahajans or sahukars and others like the zamindars, well-to-do farmers and Kabulis who advance loans to borrowers. They are not bankers in the modern sense of the term because they do not receive deposits but only lend from their private resources. Most of them charge exorbitant rates of interests, lend for unproductive purposes and some keep either no account or irregular ones.

The indigenous bankers finance both trade and commerce of the towns and agriculture of the villages. The town banker is known as the *shroff* in Upper India and as the *chetti* in the South. The shroffs from the essential link between the commercial banks and businessmen most of whom do not come in direct contact with the banks. Their main function is to purchase the *hundies* of merchants and to get them discounted with the banks if their private resources do not suffice to meet the market demand for money. They charge from $1\frac{1}{2}\%$ to 2% higher rate of interest to the businessmen over and above what they themselves have to pay to the banks. In the absence of a widespread joint-stock banking, these shroffs have been, and will continue, playing an important part in financing the town business.

The village *mahajan* or the *sahukar* occupies a still more important position in the village economy. Cooperative societies are few and they lend money for productive purposes alone. The *mahajan lends for both productive and consumption purposes* like marriage, births, deaths, payment of rent and revenue. He will accept any thing as security, and at times will lend without it; the borrower is made to write a'ruqqa' or the 'pro-note' for the sum borrowed. In this respect he enjoys clear advantage over the co-operative society, and therefore flourishes at its cost.

But for this facile credit the cultivator has to pay exorbitant rates of interest, varying from 12% to 100% and occasionally to a higher figure. The most favourable rate charged on loans advanced on the security of jewellery is 1 pice per rupee per month or $18\frac{3}{4}\%$. At the time of sowing, grain is also lent on what is called '*sawaya*' or '*dhyodha*' system according to which 25% or 50% more grain is paid back after the harvest. This form of lend-

ing is highly profitable and is widely practised in rural areas. In addition to the *mahajans*, even zemindars and well-to-do peasants have undertaken money-lending as a side business. Due to high rates of interest, the borrowers can hardly ever hope to be free from the debt which becomes ancestral legacy and acts as constant source of anxiety and cause of poverty to the farmers. Major part of the produce from land is used up in paying the interest and very often the farmer has to part with his land to pay back the debts and become a landless labourer.

The mahajans have been called an *evil necessity*. Their services are needed as long as the agencies to supply cheap credit are inadequate and the security that the farmer can offer is not dependable. Government grants '*taccari*' loans, but they are insufficient, rather delayed, and the system of their distribution and realization is unsatisfactory. Legislative enactments to check usury and to fix the maximum rates of interest permitted on different types of loans will not succeed in improving the farmer's lot. Nor has the Land Alienation Act, preventing the transfer of land from the agriculturists to non-agriculturists, helped them in any way. It has only resulted in reducing the security value of their land and they have to pay higher rates than before.

Defects in indigenous banking

(i) Indigenous bankers perform only lending side of banking business but do not receive deposits. They thus fail to encourage thrift among their clients. (*ii*) Rural money-lenders mainly finance agricultural operations and crop movements and artisans but do not undertake discounting business. (*iii*) Their resources are inadequate as they depend entirely on personal savings and have no liaison with commercial banks. (*iv*) They thus charge exorbitant rate of

interest. (*v*) They lend money on the security of immovable property, a factor against the established practices of banking.

Remedies

(*i*) The establishment of contact between rural money-lenders, and commercial banks and credit houses of the towns will remove many of the evils. It will put them in adequate funds thus automatically reducing the rate of interest. (*ii*) They should be licensed, compelled to maintain regular accounts of their dealings with the clients, and these accounts should be subjected to critical audit periodically. (*iii*) The maximum limits of interest permitted on secured and unsecured loans be fixed on the lines of the U.P. Government regulations and these limits strictly enforced, the punishment for circumventing the usury laws to be cancelling of the license in addition to other suitable penalties. (*iv*) The Co-operative movement should be spread on more extensive scale after being purified of its several short-comings. It will improve the economic position of the villagers, create in them the sense of self-respect and improve their bargaining power. The presence of an alternative source of credit supply will force down the money-lender's rate of interest and check severe malpractices against the poor and ignorant borrowers.

DISTRIBUTION

DISTRIBUTION

CHAPTER I

THE PROBLEM OF DISTRIBUTION

Production of wealth in modern times is based on specialization. A study of industrial organization makes it clear that, with the development of economic activity, combined effort in production assumes greater importance while individual production recedes into the background. Though there will always be some scope for small businesses somewhere in the economic world, yet most of the wealth that is produced to-day is the result of combined action of many who have contributed to its creation in their specialized way.

If production organized is of a simple type and owned by an individual, where all the factors of production are supplied by the owner himself, there is no difficulty in pointing out the person to whom the wealth produced should go. But the difficulty of calculation of the net wealth created and the portions that should go to different factors, increases with growing complexity of combined production. In a big business now-a-days all the factors of production are not supplied by an individual or the family. Though the functions of organization and enterprise may be combined in the owners, land and labour specially are supplied by other persons. In joint-stock companies, this specialization is carried much further and a single factor is contributed by a particular set of people. The wealth that is produced by the combined effort of all the factors is the result of their productive services and consequently they

are the rightful claimants to its appropriation. But the factors themselves being inanimate things, they cannot receive payment for their services. The payments are made to the persons who have supplied the several factors. These suppliers of the factors of production are called the agents of production. The payments for the services rendered by land goes to the landlord who has supplied land; the payment for the services of labour goes to the labourers who made that effort; and so on.

When specialization in the contribution of the factors of production has reached the present stage it is not enough to know that the product belongs to all the factors or their agents taken together, but one must be in a position to know how much of it should go to individual factors or their contributors. That is the crux of the matter. The distribution of wealth has become a practical problem of great importance and it has become so because of specialization in industry.

1. What is to be Distributed?

It is very simple to answer the question. 'What is to be distributed?' by saying that the five factors of production can claim as their joint remuneration only as much of wealth as they have jointly helped to produce. But it is difficult to estimate accurately this net amount of wealth produced in any period of time. Unless it is known exactly how much there is to be distributed, the factors of production cannot be properly and adequately remunerated. The conditions of actual allotment of their shares do not show that every factor is receiving its just due in payment of its services. Even while production is continuing from day to day, interim payments are made to some of the agents as they cannot afford to wait long enough to see exactly how much of that wealth has been produced

and then to claim their share. Labourers receive their wages weekly, fortnightly or monthly; capitalists receive their interest quarterly or half-yearly. They are paid a lump sum as final payments for their services whether this sum be a proportionate share of the net wealth produced at the end of the year or not. Yet, the balance sheet of a firm is made at the end of the year; and it is only then that a true estimate can be prepared of the net income earned by the firm. A firm takes stock of every kind of income it has been earning in the course of a year and deducts from that total the expenses incurred during the period; the balance is the net wealth produced in the year. This is the net income of the firm that should be finally allotted to different agents of production.

National Dividend.—The income of the society or of the nation is called the national income or national dividend. It has been defined as a net aggregate of commodities, material and immaterial, including services of all kinds that have been produced in a year by the labour and capital of a country working upon its natural resources. National income, according to this definition, should be measured in terms of goods because it is the goods that satisfy human wants immediately, and upon them depends the real economic well-being of the nation. Income in terms of money may be good enough for calculation and comparison, but money income is only a means to secure the income in terms of goods.

The simplest plan to calculate national income will be to measure the amount of wealth a nation possessed at the beginning of any period, preferably a year, and deduct it from the amount it came to possess at the end of that period. The balance will be the annual national income. Suppose, for example, the money value of *every* form of wealth owned by Indians individually and collectively on January 1,

1937 was Rs. 1,000 crores, and another similar estimate on December 31, 1937 showed it to be Rs. 1,050 crores; then Rs. 1,050 crores *minus* Rs. 1,000 crores is the money value of wealth produced in the course of the year or it is the Indian National Income for 1937. It will be a national problem to distribute this amount among different groups of people who have been responsible for the creation of this new wealth.

2. How to Distribute the Joint Income

After knowing what to distribute and among whom to distribute, the more important problem remains that of 'how to distribute.' It is true that greater the national income earned in a period the greater should be the well-being of a country, but this depends upon the manner in which the actual distribution of income takes place. If a factor has not been fully and properly remunerated, its supply will diminish and also its efficiency and this diminished and inefficient supply will be a hindrance to smooth running of the nation's productive activity. If the labourers receive less than their due share, a lowering in the standard of living will diminish the national dividend and as a consequence the future share of it that can go to other factors too will diminish.

The portion of national dividend that should go as remuneration to a factor should be enough not only to keep in a fit state of efficiency, but also to ensure its regular and increased flow into industrial production. If the supply of a factor of production is fitful and irregular, smooth and steady running of the productive activity will not be possible. If the flow of the factor is inadequate and does not increase, as time passes on, no industrial development and growth of national income will be possible.

Keeping this principle in view, it will be our con-

cern to study in the following chapters how the distribution of income takes place.

EXERCISES

1. Why has the question of distribution become a practical problem in modern industrial production? Can you think of any stage in the economic development of man when this problem was of no importance?

2. What is national dividend and how do you calculate it? Has an increase or a decrease in its quantity any bearing on the economic well-being of the nation?

3. If national division grow, it will automatically lead to a material improvement in the conditions of every member of the society. Do you agree with the statement? Give reasons for your answer.

4. The problem of distribution is not only to distribute the earnings but to distribute them fairly on those alone who have contributed to their creation. Explain the conditions set in the above statement, that will make the distribution of earning equitable.

5. What do you study under Distribution? What is it that is divided? Explain the relation of national income to the welfare of an individual and of a community.

CHAPTER II

RENT

§ 1. **Meaning of Rent.**—In economics, rent is understood to be the reward for the services of land and other gifts of Nature in an act of production. Of all the factors of production land is the most indispensable. From the very birth of economic life, land has been at the basis of human activity and will continue doing so for ever. The fertility of the soil can be exhausted by repeated cultivation and can also be improved by means of irrigation and manuring. Similarly, its situation can be marred or improved by the nature of the means of transport and communication. But the two important characteristics of land, that is, *area* and *solidity*, remain unaltered in spite of continuous and intensive use that is made of land. These properties of land have, therefore, been called its *original and indestructible powers* and rent is the reward paid for these basic properties. To clarify it with an example, if out of the popularly called rent of a house, a deduction is made for the remuneration of the money spent in building that house, the balance will be 'rent' in the economic sense of the term, for the space on which the house stands.

§ 2. **Why does rent arise?**—The rent arises because of the *differential advantages in fertility and situation* enjoyed by the different plots of land. Though all land is similar in area and solidity, it differs in fertility and situation. The structure of the soil, its chemical ingredients and biological growth, govern the fertility of land while the advantages in situation depend upon the extent to which a land is served by roads, railways and canals. Both these

factors in conjunction influence the productivity of land. If a plot of land enjoys them together in a higher degree than another plot, the investment of a certain amount of labour and capital will yield greater returns on the first plot than on the second. As a result, the rent on these plots of land will be different.

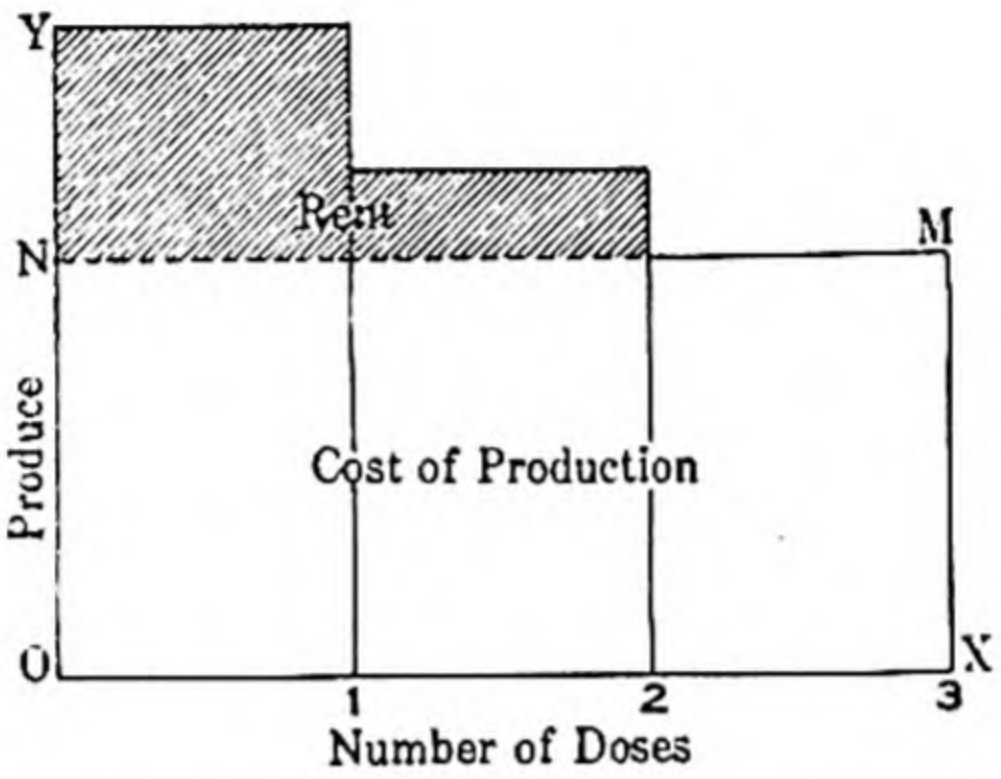
The differential advantages of different plots of land become more prominent and can be explained as being governed by the facts that the *quantity of land is limited* and that agriculture is subject to the *Law of Diminishing Returns*. If the quantity of land of good quality were unlimited, the cultivation will be confined to this quality only. Even when the demand for agricultural produce increases due to an increase in population, more and more of the superior quality land will be brought under cultivation and each plot will be cultivated up to the point of maximum returns. But because the quantity of superior quality land, as also of land in general, is limited, in order to meet the needs of an ever-increasing demand for the produce of land, it becomes necessary to cultivate each plot of land more intensively. This *intensive cultivation* or the application of increasing quantity of labour and capital to the same plot of land, will result in comparatively poorer yield due to the operation of the Law of Diminishing Returns. As soon as it becomes worth while cultivating a superior quality land beyond the point of maximum returns, we may as well consider the cultivation of the next quality land. This lower quality land, just because it is poorer land, will yield smaller produce than the superior quality land. Thus it is seen that because of the limited supply of superior quality land and the tendency of diminishing returns, the differential advantages come into play.

§ 3. **The law of rent.**—The rent of a plot of land is equal to the *economic surplus* earned on that plot.

This surplus can be easily calculated either on the basis of intensive cultivation or on that of extensive cultivation. On the intensive basis it happens to be the *excess of the total produce over its cost of production.* Calculated on the basis of extensive margin, it turns out to be the same amount, though in this case it is got by deducting from the produce of the superior plot, the produce of the marginal land. Marginal land at a particular time is the worst quality land that is just worth while to cultivate. It yields a produce sufficient to cover the cost of production incurred on it and no more. As the marginal land leaves no surplus, no rent accrues on it and it is called the no-rent land.

To calculate the rent or economic surplus on the intensive basis, suppose there are three plots of land, *A*, *B*, and *C* arranged in the descending order of quality. On *A*, the best plot of land, the first dose of labour and capital costing 20 seers yields a return of 30 seers, the second dose yields 24 seers, and the third 20 seers. The third dose is the marginal dose as it yields just enough to cover the cost of it and no more. At the third dose the margin of intensive cultivation is reached because the application of the fourth dose will yield less than 20 seers and hence will not be applied. The *B* plot of land will produce, suppose, 24 seers and 20 seers respectively from the application of the first and second doses; while the *C* plot being very poor can take and pay for only a single dose by yielding 20 seers of produce. The margin of cultivation on *B* plot is reached on the application of two doses and in case of *C* plot on the application of only one dose. The rent on *A* plot will be equal to the total produce minus cost, *i.e.*, $(30+24+20)-(20\times3)=14$ seers. A similar calculation shows the rent of *B* plot being equal to $(24+20)-(20\times2)=4$ seers; and of *C* plot as $20-20=$nil. Represented

graphically in the case of *A* plot, the rectangle *OXMN* stands for the cost of three doses and the shaded portions for the rent or economic surplus.



§ 4. **Rent will arise even if all land was of a uniformly high quality.**—The above discussion brings into prominence another point of importance. And it is that even if there be no difference in the quality of land or all land belonged to a single high quality, the rent will accrue. Whatever the quality of land, just because its supply is limited and also because it is subject to diminishing returns, it will have to be cultivated more intensively due to a rise in demand for the produce and will eventually yield a surplus over the cost. For example, if all available land had been of *A* quality, three doses of labour and capital would have uniformly been applied to all the plots and each would have given an equal surplus of 14 seers. But the rent must have existed. A removal of difference in quality of land will, therefore, do away with the *difference in the amount* of rent yielded by different quality lands; it *will not remove the rent itself*.

§ 5. **Rent on extensive margin.**—For the calculation of rent on the extensive margin, it is necessary to apply equal quantity of labour and capital

on a superior quality land and also another plot which is on the margin of extensive cultivation. The marginal land will produce just enough to meet the cost of production while the superior land will yield more than that. This surplus will be the rent on the superior land. For example, if 3 doses, costing 20 seers each, applied to *A* grade land yield 74 seers, while the same doses applied to the marginal land yield 60 seers, the rent on *A* plot will be 74—60 or 14 seers. Of course to enable the marginal land to take in an equal investment with the superior land, a proportionately greater area will have to be tilled. In the above example, if one acre of superior quality land is cultivated, three acres of the marginal land will be required for the employment of three doses of labour and capital.

§ 6. **Contract Rent.**—The amount of rent, either in cash or in kind, that a tenant undertakes to pay and which is determined by mutual agreement or contract between him and the landlord, is called contract rent. It is distinct from the economic surplus or true rent or economic rent though it is determined with reference to that. Ordinarily, contract rent is below the level of economic surplus and is fixed according to the demand for and the supply of land. The economic surplus measures the material value of the services of land in production and the utmost that a tenant could justifiably pay for land will be this economic surplus. If the land is plentiful and the demand for it is weak, as in the colonies or comparatively new countries, the contract rent, as the price for the use of land, will be much below the economic surplus. But in the old countries, where almost all available land has been brought under the plough but whose population is increasing and with it the produce of land as also the demand for land, the contract rent will be much nearer the

economic surplus or may be equal to it. But if the demand for land grows still higher, so also the dependence of population on land as the main source of living, the contract rent may even exceed the economic surplus. In the industrially backward areas without alternative means of support, or during the period of acute industrial depression, the demand for land may be intense. At the same time a poor, illiterate and unorganized peasantry may have to bargain for the use of land with the rich, clever and powerful landlords. In such circumstances the contract rent is bound to take up the entire economic surplus and something more from the normal profits of the cultivators.

§ 7. **Changing Margin.**—The margin of cultivation is not a stationary point but its position is a relative one. It changes in relation to the purpose to which land is put and to changes in the price of produce, to crops raised, to improvement in the art of cultivation and others. A plot of barren land unsuited for cultivation may become a good quality land for building purposes; a marginal land for wheat production will become a super-marginal land if used for maize growing; a rise in the price of the produce will enable the yield of the marginal land to bring in more value than before and the sub-marginal land may also become worth while to be cultivated; similar will be the result of improvement in the system of agriculture. Thus a marginal land which is marginal at one time and yields no rent, may rise above the margin and begin to pay rent; or it may fall below the margin and its use for a particular purpose may be given up. But there is *no absolute marginal land in use*; all lands pay rent, except the arid deserts, mountain-tops or bottoms of the sea which cannot be put to any use whatsoever and hence bear no rent at all.

§ 8. **The position of the margin as affecting rent.**—The amount of rent accruing on a plot of land increases with an extension and diminishes with a contraction in the margin of cultivation. An extension in the margin means that either more doses are applied to the same plot, or the plots below the marginal land are being cultivated. In each case it will lead to either a proportionate increase in the output or a fall in the cost so that the economic surplus will increase. A contraction in the margin will mean, on the contrary, that a fewer doses are applied to the same plot or the marginal land has ceased to be cultivated. In either case it will lead to a diminution in the output or an increase in the cost and therefore rent will diminish.

§ 9. **Price of produce and rent.**—There is a direct variation between price and rent, *i.e.*, the rent rises with a rise in price and falls with a fall in the price of the produce. A rise in the price of the produce will lead to an extension of margin and rents will increase; a fall in the price will contract the margin and rents will decrease.

Referring to *A* plot of land yielding 30, 24 and 20 seers from successive doses, the money income at 8 seers a rupee would be Rs. 3-12-0+Rs. 3-0-0+Rs. 2-8-0 or Rs. 9-4-0, the money cost of production would be Rs. 2-8-0×3 or Rs. 7-8-0 and the rent, therefore, would amount to Rs. 9-4-0 less Rs. 7-8-0 or Rs. 1-12-0. If the rate of produce changed from 8 seers to 6 seers a rupee (and the *cost* of production *also changed* in the same proportion), the value of 74 seers of produce would be Rs. 12-5-4 and the value of 60 seers of cost would be Rs. 10 and the rent would be Rs. 2-5-4, an amount more than the previous rent of Rs. 1-12-0. But if the price rises but the *cost* of production *does not*, the value of produce will be Rs. 12-5-4 at 6 seers a rupee, the cost will

remain Rs. 7-8-0 at 8 seers a rupee and the rent will increase *still more* to (Rs. 12-5-4 less Rs. 7-8-0) Rs. 4-13-4.

The increase in rent will be the same, Rs. 4-13-4, even if the margin extends by a single dose, as the fourth dose will yield just sufficient to cover the cost and will leave no surplus. Of course, if the cost of production rises in proportion to the rise in the price of the produce, there will be no change in the margin of cultivation.

Calculations may be made for a fall in the price on similar lines. If rate falls and the cost also falls proportionately, from 8 seers a rupee to 10 seers a rupee, the rent falls from Rs. 1-12-0 to Rs. 1-6-5. In case the price of produce falls but the cost remains the same, the rent will (Rs. 7-6-5 minus Rs. 7-8-0) vanish and cultivation must be contracted. Anyway the fall in rent is greater than before when the cost also falls along with the price.

On examining the effect of rent on the price of agricultural produce, it may be said at the outset that rent does not influence the price. The rent may be high or low or totally absent, but the price of the produce will remain unaltered. It must be understood that irrespective of the different sources of supply there will be one price in the market and this price must be sufficient to remunerate the cost of production on the marginal land. The marginal land which fixes the cost of production bears no rent whatever, yet this cost determines the price of the produce from the supply side of it. This same price will be paid whether the produce is drawn from a superior quality or inferior quality or the worst land, which bears high rent or low rent or no rent respectively. In short whatever the amount of rent, the cost remains unchanged and consequently the price will also remain the same. Even if the eco-

nomic surplus that accrues on any land be not paid to the landlord but left with the cultivators, it will have no effect on the price of the produce as total produce or supply remains the same. To sum up, *high and low rents are the consequences of high and low prices, but not their cause.*

§ 10. **The effect of improvements in the art of cultivation on rent of agricultural land.**—An improvement in agricultural methods takes the form of the employment of better tools and instruments, the construction of wells or canals or the substitution of machinery for manual labour and the like. Though the improvement increases the cost of a dose, it also leads to a greater increase in the returns. If not, the improvement will not be worth the name. If the demand for agricultural produce is fixed, the old quantity will be raised with fewer doses of labour and capital and the intensive margin will shrink. Similarly, only the better quality lands will suffice to produce enough to meet our requirements and the worst lands will be abandoned, that is, the extensive margin too will contract. Thus though it may seem to be paradoxical, an improvement in the agricultural methods results in lowering the rent.

If, however, the demand for agricultural produce be considered elastic or advantage be taken by exporting the excess produce to foreign lands, a more intensive cultivation will be undertaken with the result that the margin will fall and the rents will increase.

§ 11. **Social progress and rent.**—The advance of civilization leads to higher rents in various ways. If there has been an increase in the economic prosperity of the people and they have grown richer, the use of more and better quality of food articles and other products will be promoted. It will tend to increase the demand for land and its more inten-

sive utilization. The margin of cultivation will fall and the rents will rise.

A *growth in population* will likewise increase the demand for land produce and hence of land, the fall in the margin will again result in higher rents.

An *industrial development* of the country leads to the growth of towns and cities which occupy ever-increasing area for building and factory sites leaving smaller area for cultivation. Thus a greater utilization of land or its more intensive cultivation is rendered imperative and rents rise.

The opening of *new markets* where home produce can be sent due to an improvement in the means of transport and communication will encourage exports and lead to a fall in the margin and the rents will rise. But if the area has been connected with countries or regions from where cheap produce can be imported, the worse quality lands at home will be given up and due to a contraction in the margin the rents will also fall.

§ 12. **Rent and the cost of production.**—*True rent*, being the surplus over and above the cost of production, cannot form a part of the same cost. If 50 seers is the total produce of a field whose cost of cultivation is 40 seers, 40 seers suffice to remunerate every factor other than land used in the cultivation. It is only when every other factor has been paid for that there is a surplus left over, 10 seers in this case. Certainly, this residue is not a part of what has already been distributed. Again, in the case of the marginal land where cost is equal to the produce, there is the cost but no rent as there is no surplus over that cost. When rent can exist only *apart* from the cost of production, it cannot possibly form *a part* of cost.

The case of the *contract rent* is different. In any business, when the profit and loss account is

being prepared, the rent of the shop or the factory or any space used is included in the items making up the total cost or expenditure. It is only when the income has been in excess of this gross total that a profit is realized. The contract rent, like wages or interest, already determined and undertaken by the tenant to be paid, becomes as clear and distinct a liability as any other item of the expenses. The output from production may or may not come up to the expectation, but the contract rent will have to be paid by the tenant and consequently must enter the cost of production. Farming is as much a business as any other and here also rent, which the farmer has found himself to pay, must be included in the cost in order to calculate whether farming is worth while or not.

EXERCISES

1. What is meant by 'rent'? How does it arise and how is it measured? Illustrate your answer with a graph.

2. What are the differential advantages which different plots of land enjoy in varying degrees? Are these differences enough to justify rent on the superior quality land?

3. State and illustrate the Law of Rent. Show whether rent will arise if all lands were equally desirable.

4. "Rent is a surplus." Explain fully on the basis of intensive and extensive cultivation bringing out the relation between this surplus and the margin of cultivation.

5. Establish the proposition that high rents are the consequence of high prices and not their cause; or, that rent forms no part of those expenses of production which affect price.

6. How will rent be affected (a) by improvements in agricultural methods, (b) by linking a region with a new country by means of a railway; (c) by the growth of population: (d) by a general advancement in the prosperity of a country?

CHAPTER III

LAND REVENUE SYSTEM IN INDIA

§ 1. **The law of rent as applicable to Indian conditions.**—The theoretical discussion of the law of rent implies free competition between the contracting parties, *i.e.*, landlord and cultivator. Such freedom of choice and enterprise is not enjoyed by the majority of actual tillers of the soil in this country. But it should not be understood to mean, therefore, that the law of rent is inapplicable to Indian conditions of agriculture. The fact is that the operation of law is as true in India as in any other country, but due to special influence exercised by custom and tradition in the village life and also due to the solicitude of governments for the protection of the rights of tenantry, the free competitive feature of the law of rent *is modified by custom and legislation.*

Free competition, if permitted to have unrestricted play, will go against the interest of the cultivators. In the absence of subsidiary and cottage industries over a large part of rural India, their dependence on agriculture as the only means of living is absolute. And due to a rapid growth in population, its pressure on land is fast increasing. Thus the demand for land is becoming more intensive. The supply of land being constant, the landlord is in a position to charge even more than economic surplus by way of contract rent. It is with a view to safeguard the interests of the ignorant and economically poor class of tenants that the various provincial governments have been introducing tenancy legislation of a progressive character. With regard

to custom, once this factor kept rents at a low level because then the population was sparse, land in plenty, and relations between landlord and tenants were based more on social and less on economic considerations. But now those ties of mutual help and support have weakened due to the appearance of general poverty and modern business tendency in the countryside, and the customary low rents enjoyed by the tenants for generations together, have almost disappeared.

§ 2. **Land tenure.**—The study of land revenue system falls under two heads: land tenure, and settlement. Land tenure is the way in which land is held. It determines the person or persons who hold rights in land, their liability to pay revenue to Government, and the unit of area or circle on which revenue payable is calculated. The entire land in India belongs to the Government which receives revenue or land revenue from landholders. The second interest in land is that of the cultivators who ultimately pay rent for the services of land. Between these two primary interests are found at places a third party of individual or individuals who act as intermediaries, receive rents from the cultivators and pay revenue out of it to the Government. On the recognition of these two or more interests in land, the tenures have been divided into three main classes:

(*i*) *Zemindari System.*—Under this system one person or a few joint owners are held responsible for the payment of land revenue over an entire estate comprising a village or a group of villages. This system prevails in Bengal, Bihar, Orissa and Oudh.

(*ii*) *Joint Village or Mahalwari System.*—Here the village or estates are owned by co-sharing bodies or by village communities the members of which are held jointly and severally responsible for the payment of revenue. In character these estates are similar

to zemindari estates, differing in the sub-division of their proprietary rights only. Here one of the co-sharers may be appointed a Lambardar to act as the representative of all the co-sharers or the entire village community. This system prevails in the Punjab, Agra and Central Provinces.

(*iii*) *Ryotwari System.*—Here land is held in small, single, independent units by the actual cultivators called the survey-number-holders who are separately responsible for the payment of revenue either direct to the Government or through their headman called the *Patel*. In ryotwari (unlike the tenures *i* and *ii*) no intermediary is recognized between the Government and the cultivators though occasionally a cultivator may hold land in excess of his power of cultivation, and sublet it to farmers who pay him rent. This system prevails in Bombay, Berar, Madras and Assam.

Settlement is the determination of the share of the produce of the land due to the state, and the liability of person or persons who will pay this share. It also records all private rights and interests in land required and enjoyed by different persons. Settlement is either permanent or temporary.

Permanent settlement was introduced in 1793 by Lord Cornwallis in Bengal, Bihar and Orissa, and later on extended to Chhota Nagpur, Benares division of U.P. and Northern Sircars in Madras. Under this settlement the liability of the zemindars was fixed in perpetuity, the revenue fixed at over 90% of what they received as rents from the cultivators, the remaining portion left with them as remuneration for their trouble and responsibility. Permanent Settlement is a feature of zemindari system and covers over 3/5 of zemindari tenures.

Temporary settlement is the settlement made roughly at intervals of 30 years as is the case in

Agra province, though the period varies from 20 years in C.P. to 40 years in the Punjab. No single system of assessment obtains in India. The basis for assessment of revenue in U.P. is economic rent; in Madras it is net produce after making allowance for all items of expenditure including the cost of marketing; while in Bombay it is openly empirical and left to the discretion of the settlement officer.

Land revenue payable to the Government was fixed in 1902 at roughly between 45 and 55 per cent of *rental assets* or the total rents realized on an average by the zemindars from their tenants. Later on, the percentage was reduced as in the settlement of Gorakhpur district in 1919 the Government share was fixed as 43·4%. But in spite of a reduction in the percentage, the net revenue realized by the state has, instead of diminishing, actually gone up. The cultivators too have received no relief as they are paying higher rents than before. The lot of the cultivators in the ryotwari tracts is much better as they pay about 1/5 of their gross produce in the form of revenue. They also enjoy the privilege of changing their field or alter the area each season and yet pay revenue according to the rates based on the classification of the soil and its produce in each case.

§ 3. **Tenants in U.P.**—The United Provinces truly represent the whole of India as they contain the various types of tenures and settlement prevailing in the country. The two special classes of tenants peculiar to permanently settled areas in Benares division are Permanent tenure-holders and Fixed-rate tenants.

(*i*) *Permanent tenureholders* enjoy the rights and privileges practically identical with those of zemindars: they have the right of sale in their property, and the ownership of land is heritable. The

amount of payment due to the landlord was likewise fixed for ever in 1793.

(*ii*) *Fixed-rate tenants* also enjoy transferable and hereditary rights and the rate of rent on land payable by them was also fixed in 1793. They not only pay the same amount on land held as at the time of permanent settlement, but the rent will increase or decrease proportionately if they increase or decrease the area under their cultivation.

The classes of tenants described below are to be found all over U.P. with slight alterations in their rights.

(*iii*) *Ex-proprietary tenants*.—This class consists of those tenants who were once landlords but having fallen on evil days have sold away their zemindari, but continue to cultivate their *sir* land. They acquire ex-proprietary rights on this *sir* land which they themselves used to cultivate prior to the transfer of land. The exproprietary right can be inherited from generation to generation, but it cannot be transferred. They pay 25% less rent than that paid by ordinary tenants on the same quality land.

The above three classes of tenants are privileged tenants. The rents payable by the first two classes were fixed in 1793 and are not liable to change. Hence, they pay much less than economic rent, the present level of rent being much higher than that prevailing at the time of permanent settlement. A reduction of 25% is a big concession and the ex-proprietary tenants also obviously pay less than the economic surplus, though certainly more than the permanent tenureholders and fixed-rate tenants.

(*iv*) *Occupancy tenants*.—The occupancy right used to be acquired (before passing of the Agra Tenancy Act, 1927) by a cultivator if he continuously cultivated for 12 years the same land, meaning land under the same zemindar wherever it might have been

situated. Since the passing of the above Act, occupancy rights cannot be acquired as a matter of course, but only conferred by the zemindar on tenant in lieu of some monetary consideration or service rendered by the tenant. The right of occupancy is heritable, but not transferable. The rents of occupancy tenants can be increased either by mutual consent or by a court of law and not arbitrarily. The enhancement can be made only once in 10 years and that too by not more than one anna in the rupee.

(*v*) *Statutory tenants or life tenants* were created under the Agra Tenancy Act of 1927. Any tenant by virtue of once cultivating a plot of land acquires life tenancy in it and cannot be ejected if he continues paying the rent fixed on it. His successors also acquire the right of cultivating it for 5 years after his death. Their rents can be enhanced only at *roster* years that will be declared at the interval of ten to twelve years.

(*vi*) *Tenants-at-will* are those tenants who have no right of occupancy for any length of time and can cultivate a plot of land during the sweet will of the landlord. They have no stability of tenure and can be ejected from their land any time. The Agra Tenancy Act had intended to convert all tenants-at-will into statutory tenants, but the provisions of the Act are circumvented by the ingenuity and stronger economic position of the landlords. Tenants are not permitted to cultivate a piece of land unless they bind themselves by agreement to renounce statutory rights that they would otherwise acquire. And they are forced to adopt this course and renounce their legal rights as otherwise they will not get land to cultivate and will have to go without a means of living.

In *Oudh*, the rights of the tenants are not protected to this extent and the Taluqdars there possess a greater hold over the tenancy. The Taluqdar is a

sanad-holder and is considered superior to the zemindar of Agra province. He has retained superior control over his tenants and successfully resisted any considerable improvement in the rights and privileges of the cultivator.

In *Kumaon* division, the cultivators (*padhans*) are more like peasant-proprietors. The land there is scarce and has mostly been created by the cultivators by cutting down and levelling the hill-sides. Even the narrow banks and channels of the rivers are utilized for catch crops. Land is, therefore, owned by the cultivators themselves who pay revenue to the Government—a sort of ryotwari system.

§ 4. **Features of good land tenure system.**—The two good features of an ideal tenure system are *fixity of tenure* and *fair rents*. The cultivator must be assured in the possession of the land that he cultivates, for a considerable period, the least being life tenancy. It is the fundamental condition of progressive and improved cultivation. The magic of property turns sand into gold; and given the assurance of undisturbed enjoyment of the fruits of improvement in the art of cultivation, a farmer will turn a barren land into a garden. The fixity of tenure ensures better farming and more prosperous life to the tenants as well as the landlords who benefit from increasing economic surplus. Fair rents are also essential for the continuity of better cultivation and a growing prosperity of the countryside. If rents are unfairly heavy, *i.e.*, exceeding economic surplus, the normal profits of the cultivators will be reduced, their ability to introduce improvements in the art of cultivation will diminish, and their staying power in the face of calamities gone. The result will be deterioration in cultivation, impoverishment of the tenantry, ultimately lower rents, and depopulation of the countryside due to movement of the people from the rural to

urban areas. Rents equal to economic surplus are just,. but in order to be fair, we believe, they should be somewhat below this level. The cultivator should be adequately compensated for increased cost incurred in introducing improvements on the soil as otherwise improvements will be discouraged. Moreover, a part of the economic surplus left with the cultivator will make him more able and more willing to adopt the system of better farming.

In conclusion, it should be noted that in U.P. all tenants except the tenants-at-will (unfortunately their number is still great) enjoy full or satisfactory fixity of tenure. The rents are decidedly very fair in the case of first three classes of privileged tenants; fair in case of occupancy tenants; just, yet not fair, in case of statutory tenants as they pay no less than economic surplus; but definitely unfair and exorbitant so far as the tenants-at-will are concerned.

EXERCISES

1. What is the Law of Rent? How far is it applicable to India?

2. What do you understand by a land tenure system? Give the various tenures prevailing in India with their characteristics.

3. Distinguish between ' land tenure ' and ' land settlement.' Why do you prefer temporary settlement to permanent settlement?

4. Give an account of the types of tenants found in different parts of the United Provinces. What improvements in their rights and rents would you like to introduce?

5. What are the two important features of a good land tenure system? How far are these found in the case of Tenantry in U.P.?

6. How will the economic conditions of the tenants in India be affected if the zemindars are deprived of their rights? Suggest the lines on which the zemindars can improve the prosperity of the countryside.

CHAPTER IV

WAGES

§ 1. **Meaning of wages.**—Wage is the price paid to the labourers for their services rendered to the cause of production. Like land, labour is also a primary factor, and though in modern productive activity, capital has been occupying an increasingly prominent place, the importance of labour has not diminished at all. On the contrary, a larger scale of production with greater specialization, wider markets and more plentiful capital, needs more efficient services of a higher type of labour.

Among labourers are counted not only the hired labourers who are engaged by an employer and work for him as directed by him but also those persons who contribute their physical and mental effort either as independent producers like a carpenter, a doctor, a lawyer and a businessman, or who organize and run big industrial concerns like a mine, a factory or a bank. A doctor is his own master and can work as and when he chooses; the payment that he receives for his work is called fee; but this freedom of action and absence of outer control does not change the nature of his services, which he exchanges for some payment. The employer may be working in his business and in that case his services are not being exchanged. But he could employ a manager to do the same job and pay him accordingly. Therefore, to the extent he organizes his own business he contributes labour and is a labourer; and out of his total gain from the business a sum equal to the salary which a manager could command should be considered as his wages.

§ 2. **Is labour a commodity?**—For the determination of wages, it is convenient to treat labour as a commodity and the wages paid as its price. But it is not implied that labour is as inert or lifeless as wheat or mutton, tin-plates and carrots, or that labour can be sold and sent to be utilized at any time and place ignoring the labourer's likes and dislikes, his associates and environments of the working place. What is meant is that though the human element in labour cannot be eliminated, it is true that durng the period for which a labourer is engaged by an employer, his labour or service is entirely at his master's disposal. The employer can use his service in the way he thinks best, of course, without injuring the labourer's person or dignity, as otherwise the labourer will protest and even retaliate. And in this respect the labourer can be differentiated from a hammer or an anvil as these are incapable of complaining however mercilessly they are used. Yet, the fact remains that the factors of demand and supply and processes of higgling and bargaining are as much necessary in fixing the wages of labour as in the determination of price of any commodity particularly of a perishable nature.

§ 3. **Demand for labour.**—The demand for labour comes from the employer who needs the services of labourers for their productive efficiency. But when the employer engages a labourer, the labourer comes to the workshop with his skill alone. Every other factor of production with which labour has to be combined, is supplied by the employer. He supplies him space where to work, with raw materials on which to work and tools and instruments with which to work. He himself supervises his task and looks to other duties like buying and selling of goods. Since in a factory, a labourer works in co-operation with other factors of production supplied

by the employer, therefore, whatever he produces in a period of time, will be the result of the combined effort of several factors. This produce has to be sold away in the market and therefore in determining the wages, the question of importance is not so much the quantity of the articles produced but the money value of that part of it that can be attributed to labour alone. If the articles had to be consumed by the labourers themselves, as it may happen in co-operative production, the greater the quantity of the produce, the greater will be the share going to the labourers as their wages. But ordinarily that is not the case. Labourers do not desire nor receive a part of the goods they produce but money as the remuneration for their services.

Suppose an employer employs a worker. This labourer is supplied with all other factors needed and produces in a month goods whose *market value* is Rs. 55. In order to find out what portion of this wealth is the result of the man's labour, from Rs. 55 should be deducted the cost of raw materials used, rent of the space occupied by him, interest and depreciation on the capital goods he has been using, and proportionate charges for organizer's work of superintendence, and taxes, insurance and other incidental expenditure which the factory goods have to bear before they can be sold in the market. If the total expenses on all these items come to Rs. 20, Rs. 55—Rs. 20, *i.e.*, Rs. 35 is the net value of wealth created by the labourer. *This amount fixes the maximum of wages that the employer can pay* to this worker. It is the employer's maximum. The employer cannot afford to pay more than this money value of the labourer's productivity just as a buyer of a commodity would rather refuse to buy it than to pay more than the money value of the utility of the commodity to him.

GIRLS COLLE

§ 4. **Supply of labour.**—The next item is to know the *minimum* that a labourer will reasonably expect as wages. The wages received by a labourer should at least be enough to meet his expenditure over his health and efficiency and the maintenance and education of his children. In other words, *the cost of living of the family* fixes the minimum of wages which a labourer will accept (suppose in this case it is Rs. 30). Why the cost of living of the *family*? It may sound excessive, but it is not so. If the earning member of the family is not getting enough on which to properly bring up the children to at least the same level of efficiency as he is occupying, the supply of future labour cannot be guaranteed. On wages lower than the cost of living of the family, either the labourer will consume less and reduce his efficiency by impairing his health and vigour, or his children will not get nourishing food and proper education and future labour supply will be inadequate and inefficient. In either case the industry will suffer either today or tomorrow.

§ 5. **Determination of wages.**—Between these upper and lower limits fixed by the labourer's productivity as estimated by the employer and the cost of living of the labourer's family will be established by the wages that the labourer will receive. How much actually the wages will amount to, depends upon the employer's need of the services of the labourer on the one hand and the anxiety of the workers to get the employment on the other; and, secondly, on the comparative strength of higgling and bargaining of the two parties.

From the case of an individual worker it is easy to proceed to study the case of a group of them. In actual practice a factory-owner does not employ workers one by one by calculating each worker's productivity, but engages a number of them according

to the scale of the business. Here the problem is to establish a *rate* of wages for the entire group of labourers of a particular type, and it is solved in the same way in which the price of a number of units of a commodity purchased together, is fixed. Though the utility and money value of the successive units of the commodity are different to the consumer, his maximum price for each unit of the group demanded is the same and is governed by the utility of the marginal unit. Similarly, though the productivity of individual members of a group will be different if employed one by one in succession, and so their wages will differ one from the other, yet the rate of the employer's maximum will be fixed by the estimated productivity of the marginal labourer. In case of group of 12 persons being employed, their prospective net marginal productivity will be calculated as being equal to the difference in the output produced by 12 of them and the output which would have resulted if only 11 were employed. Suppose the whole group of 12 had produced things worth Rs .475 and 11 of them produced worth Rs. 440, then Rs. 35 will measure the maximum of the employer that could be paid to each one of the group.

If there are no other workers seeking employment in this factory, the worker's position will be strong and they may successfully insist on getting the maximum of the employer. But if there are hoards of labourers of this particular type seeking employment, the competition among them will reduce their remuneration below Rs. 35 to, say, Rs. 31, yet not below Rs. 30 as none will undertake the job below his cost of living. On the other hand, if there are other factory-owners who are anxious to employ those labourers, their wages rate may be fixed at a higher level, say, Rs. 32. But in this process of higgling and bargaining the employers usual-

ly have an upper hand with the result that more often the wages are nearer to the cost of living than to the productivity of labourers.

§ 6. **Disadvantages of labourers in bargaining with the employer.**—The first and one of the most effective disadvantages of the labourers in bargaining for their wages is the *perishability* of their labour. Labour is perishable in the sense that if the labourers remain unemployed for any length of time, their efficiency suffers. A diminished efficiency means lower productivity which reduces their worth in the labour market. That will further reduce their bargaining power. They therefore prefer to accept low wages rather than remain out of employment and thus weaken their own position.

Secondly, the labourers cannot afford to wait for more favourable times in case the terms offered to them are unsatisfactory, the reason is their *poverty*. They have little savings—almost nil—on which to fall back and there cannot possibly be any saving specially when they are adopting a career after investing their entire fortune in getting education and training. The employers, on the contrary, are moneyed people and can take their time in higgling and bargaining and thus compel the labourers to accept lower wages. The numerous unsuccessful disputes and strikes undertaken by the labourers either to prevent a cut in their wages or to demand an increase, furnish ample proof of the strength of the employers in this respect.

In the third place, the *ignorance* of the labourers about the demand for their own services in the market, their lack of necessary experience, training and skill in bargaining, go against their interest. The employer with every detail at his command and efficiency, knowledge, resourcefulness and mature experience almost always proves a better bargainer.

Fourthly, labourers lack union or organization. The employer represents in his person all the strength of undivided and firm determination which can only be acquired by the labourers when they are solidly united and bargain collectively. A single labourer or a small group is no match against the consolidated power of the employer. The need for union among the dis-organized workers is very urgent, but it is sadly lacking. The inevitable result is low wages.

Among social factors, adversely affecting the fixation of wages, *custom* plays a prominent part in conservative India. The village servants and artisans even in these days receive low customary wages justified on no other ground than that of having been in force for generations together, though the conditions responsible for the old rate have vanished long ago. To mention only a single instance, the wages of the sweepers, in spite of their task being so hard, uncomfortable and 'dishonourable,' are hopelessly low for the simple reason that they have always been such in the past. The other social factor that weakens the position of the workers is a rapid *growth of population.* The larger the population, the bigger is the supply of labour, the keener the competition among labourers, and yet greater their disadvantage in securing the efficiency wages.

It should be understood that if none of these disadvantages be operating against the labourers, they would succeed in earning the wages equal to the maximum of the employer or will receive all that their efficiency helps to produce, and these wages will be called the *efficiency wages.*

The standard of living and wages.—The standard of living of the labourers affects their wages through its influence on their efficiency and also the cost of living. A rise in the standard of living is

reflected in the satisfaction of those wants whose satisfaction results in quicker intelligence, better health and greater efficiency. A rise in efficiency leads to greater productivity and through it to higher wages. A fall in the standard means either a stinting of wants or lesser expenditure on things on which health and efficiency depend, with the consequence that productivity will be lower and so the wages. Thus a rise or a fall in the standard will raise or lower the maximum of the employer and tend to increase or diminish the wages. From the cost of living point of view, the standard fixes the minimum of the labourers who will resist a lowering of the wages below that level, but if the standard itself has gone down, the lower limit of wages is reduced. Thus a higher standard raises both the upper and the lower limits and leads to higher wages; but a lower standard reduces both these limits and consequently the wages also.

A change in wages also affects the standard of living. Due to a fall in wages the labourers will obviously fail to satisfy those wants to which they have become accustomed. A lesser income, other things remaining the same, means lower purchasing power, a deterioration in quality and quantity of consumable goods and thus a lower standard. A rise in wages means greater purchasing power which, if judiciously utilized, invariably results in higher standard of living and not in bigger families of working men. There is little truth in the contention that if the wages of labourers were increased they would either be wasted away in useless luxuries or would induce them to multiply their numbers so that the standard of living would remain at the previous level. Growth of knowledge and education have sharpened the labourers' sense of responsibility towards maintaining their own health and efficiency

and those of their children, and advantage has been taken of increased wages to raise the standard of living in every industry and every country where wages have gone up.

Thus a low standard means lower wages which lead to lower standard and again to still lower wages; so the vicious circle continues. A high standard means higher wages which lead to still higher standard and get to more handsome wages. From the side of the wages, lower wages mean lower standard and poorer efficiency leading to still lower wages; while higher wages will mean a rise in the standard leading to greater efficiency and better wages. In short, the wages and the standard of living act and react upon each other cumulatively; but it is clear that high wages benefit both the workers and the employers while the lower wages harm both of them.

§ 7. **High wages and low cost.**—Paradoxical though it may seem, high wages ultimately turn out to be much cheaper than the low ones. A labourer receiving higher wages, raises his standard of efficiency and hence his productivity is increased in greater proportion. It has been found by actual observation that a city brick-layer earning, say, Rs. 1/4/- a day lays more than twice as many bricks as are laid by a less skilful country brick layer earning only 10 annas a day. It is common experience that costly yet durable goods last comparatively much longer and serve better than cheap goods requiring less expenditure at the beginning. Similarly, it has been realized by wise employers that initially high-paid labour more than compensates them by its relatively greater productivity; and therefore ultimately it results in lowering the cost of production.

§ 8. **Time- and piece-wages.**—The labourers may be paid either according to the period of time

for which they are employed or according to the amount of work done by them. For example, the wages received by a weaver as 12 annas a day will be time-wages; but if he is paid at one anna per yard of cloth woven by him, he will be receiving piece-wages. In those occupations or tasks where the employers are confident of a standard output being raised by the workers within a period of time, or where the type of work is such as can safely be entrusted to the sense of honesty and responsibility of the workers with only slight supervision, or where the employment is more or less of a permanent nature, time-wages prevail, as in the case of teachers, clerks, mechanics, managers and others. The piece-wages are paid to those workers who do not possess a uniform efficiency, or who can be induced to exert their hardest only in the expectation of earning higher wages, or whose services are in demand fitfully and occasionally. Brick-layers, dock-workers, farm labourers, lawyers and doctors present suitable examples.

§ 9. **Real and nominal wages.**—Nominal wages of a labourer are the money payment that he receives as a remuneration for his work. This amount of money has to be spent on the commodities that are to be actually consumed by him. It is the amount of the necessaries, comforts and luxuries, that the money wages can buy, on which depends his well-being. These articles of consumption that can be brought with the help of the money wages form an *important part* of what are called the *real* wages.

A rise in the nominal wages may not reflect as much improvement in the prosperity of the workers if the prices of the commodities that enter their consumption have also gone up. A rise in the prices of articles will mean less quantity of these articles, and a fall of price will mean a greater amount of them

if the money wages remain the same. A fall in the price, therefore, increases the real wages. It should be remembered that only a change in the prices of those commodities that are consumed by a particular class of labourers will increase or diminish the real wages of that class of labourers. Any fluctuations in the prices of motor cars, for example, will not matter for farm labourers or factory labourers in India, as motor cars are not used by them. A rise or fall in the prices of longcloth, cheap fruits, cereals and pulses, salt and cheap spices or tobacco will greatly affect them.

In addition to these articles that can be bought with the money wages, the real wages include *every other kind of payment, concession or incidental advantages* that the labourers can enjoy on account of their position. A domestic servant receives occasional meals in the household. In winter he is given warm clothes or shoes. On the occasions of ceremonies he receives gratuities and presents. He enjoys free travel and sight-seeing in the company of his master. All these in addition to his money wages are to be counted among his real wages.

Mill workers are usually allowed to buy the mill produce at concession rates. Some of the more advanced firms distribute among their workers a part of the yearly profit as *bonus*. They also supply them free libraries and reading rooms, swimming tanks and playing fields, free medical treatment and primary education to their children. All these incidental advantages must be included in the real wages.

The *stability* of employment may decide the choice of the worker in favour of a less remunerative job in preference to one that carries higher wage but is a temporary appointment. And again, the worker has to consider the opportunity of *increment*

and advancement of the career that he may have in an employment. A low start with better promise for future prospects will be more attractive than a comparatively higher starting pay accompanied with poorer prospects.

And further, the *treatment* that a labourer will receive at the hands of the employer, the *company* of other workers with whom he has to pass his time at least in the factory, and the *surroundings* of the workshop that may affect his health favourably or otherwise: all these will have to be calculated in the real wages along with the actual money payments.

It is the real wages including all the items enumerated above that will be the basis on which will depend the well-being of a labourer and his choice of a particular job.

Why wages differ from industry to industry?—Real wages earned in different occupations and industries by labourers on the same level of efficiency will be more or less equal, though the money wages may be unequal. But if the total real wages are divergent, the discrepancy can be explained as due to several reasons.

Difference in the degree of efficiency required from industry to industry is the first reason. An industry may require a high grade efficiency gained only through good education and long training followed by practical experience involving heavy expenditure. The skill costing so much in money and effort must be amply remunerated. And again, because the poorer parents cannot afford to provide such an expensive training for their children, the supply of this kind of efficiency remains limited. Naturally the wages are high as is the case with engineers and civilians. Other industries, not requiring such a highly developed skill, will not pay

high wages as its productivity is low and its supply plentiful as in the case of domestic servants and farm labourers.

Secondly, different industries employ different equipment of tools and instruments and have different efficiency of organization. Some use the most up-to-date machines and enjoy the benefit of skilled management while others may be content with obsolete machines and almost a primitive organization. Even if the personal efficiency of labour required in the two types of industries may be the same and also there may be a complete equilibrium of demand and supply of labour in each, the marginal productivity of labour will be higher in the first type than in the second and so will be the wages.

One more factor which permits this inequality in wages to persist in different occupations requiring similar efficiency, is the lack of adjustment between the demand for and supply of labour among them. It is the absence of complete mobility of labour from lower wage industries to higher wage ones, or from an industry at one place to the same industry at another place, that is responsible for this inequality.

Mobility and equality of wages.—If the efficiency of workers and their equipment are the same, higher wages in one locality than in the other are due to want of perfect equilibrium between demand and supply of labour in the two places. If cotton workers of Bombay are paid higher wages than cotton workers at Cawnpore, it can be concluded that there is a comparative over-supply of labourers at Cawnpore and under-supply at Bombay. If some labourers of Cawnpore move to Bombay, they will leave a diminished supply behind, thus helping to raise wages there and increase the supply at Bombay and bring the wages down. If there is perfect mobility

between these two towns the rate of wages should be the same.

The same thing holds good in the case of different industries paying different wages. If the building trade is noted for higher wages than that of carpenters, it is because there are less builders than the number required and there are more carpenters than are necessary. If carpenters could take up building and give up carpentry, the supply of labour being increased among builders and diminished among carpenters, a greater equality in the wages will be established.

EXERCISES

1. Define "wages." What determines the rate of wages for any group of labourers?

2. What are "efficiency wages?" Discuss the factors that prevent the labourers from securing these wages.

3. "Labour is a perishable commodity." Explain this characteristic of labour and show how this influences the determination of wages.

4. How are wages determined? Do you agree with the statement that wages are determined in a manner similar to the price of commodities?

5. What do you understand by the 'Standard of Living' and how does it affect wages? Can a labourer get higher wages by raising his standard of living?

6. What means will you suggest to a labourer to help him earn high wages? Explain whether high wages are more economical than low ones.

7. Differentiate between time-wages and task-wages. Which one will you recommend for the different operations of a cotton mill?

8. Explain money wages and real wages, and exemplify your answer with reference to the wages of a mason, a domestic servant and a police constable.

9. Can you explain why there is a difference in the earnings of (a) domestic servants, (b) university teachers, (c) civil servants, and (d) bank managers?

CHAPTER V

INTEREST

Interest is the price paid for the great services of capital rendered to the cause of productive activity. Labour unassisted by capital is productive but to little purpose; it is capital in general that increases the efficiency of labour by supplying tools and instruments to labourers and making possible the economies of division of labour and large-scale production. It is for this service of capital in increasing the efficiency of human factor that interest is paid.

§ 1. **Demand for capital.**—The demand for capital arises for productive purposes and, to a lesser extent, for consumption purposes. The productive demand comes from the producers who need money for buying the raw material, machinery, or building a factory, for the payment of wages and transport and marketing expenses. In modern times, when production is on large scale and markets wide, the need for capital is great and it is rare to find a big producer in a position to supply all the capital from personal savings. Even the governments of countries, provinces, states and local bodies have to borrow money in the open market for constructing railways and canals, water-works and electric plants and other commercial schemes. The demand for consumption comes from the governments also, as for war, famine and other purposes; while individuals have to borrow money in times of straitened circumstances and for conventional necessities like marriages, births and other ceremonies. The demand for capital at a particular time is made up of all the

demands, big or small, from all borrowers and for all purposes. Though the demand for capital for consumption is insignificant, yet it affects the rate of interest in the same way as if it had been for production.

§ 2. **Demand price of capital.**—The demand price of capital, or the maximum the borrowers will be willing to pay, depends on the net productivity of capital to them or the net extra income that the producers will be able to earn due to the employment of a certain amount of additional capital. Suppose a farmer equipped with the necessary tools and instruments, but without sufficient irrigation facilities, raises from a field an yield worth Rs. 50/- per year. He borrows Rs. 100/- and applies this sum to sinking a well on his land. Due to timely and adequate irrigation, his yield increases to Rs. 80/-. Out of this gross productivity of the well, which amounts to Rs. 30/-, should be deducted its depreciation and other incidental expenses amounting to, suppose, Rs. 18/-. The balance, *i.e.*, Rs.12/-, will be the maximum or the demand price that the cultivator can afford to pay for the use of Rs. 100/- that he borrowed and invested in sinking the well.

§ 3. **The supply of capital.**—The supply of capital is possible because people save. The most important motive to save is the *thought for future.* It is prudent to lay by a part of one's income to meet the uncertainty of life in future. Illness and accidents happen and the disabilities of old age overtake everybody. As age advances, one's earning capacity also diminishes, and as a consequence there is danger of a lower standard of living, which can be maintained only with the help of past savings. Moreover it is wise to make provision against such emergencies and occasions when expenses are specially heavy, as at times of birth, marriage, death, etc.

Another motive for saving is the fulfilment of responsibility to provide for the education and training of children. It is paternal duty to give at least as good a start in life to one's children as he got from his parents, and ensure their protection if any accident or death occurs to him and stops the source of income.

The third motive to save is to enjoy economic and social advantages. Capital, when lent, brings with it interest which increases a lender's income and his power to enjoy economic services. Capital also helps people to take timely advantage of any opportunity to undertake a promising business. Other advantages like improvement in the social position and the attainment of power invariably go along with accumulated savings.

§ 4. **Supply price of capital.**—When savings are lent for a period of time, say, a year, the lender has to postpone the enjoyment he could have derived if he had chosen to spend that money today. Future is uncertain, and the lenders may be doubtful whether they will not be prevented by accident or death to enjoy their own savings. Even if they be perfectly certain of the repayment of money to themselves, there is a possibility that their own power to enjoy may be reduced at a future date. Therefore payment of interest is necessary to compensate the lenders for the possible loss of enjoyment in postponing or waiting. The rate of compensation or interest will depend on the degree of unwillingness on the part of the lenders to lend. The optimists, who usually see the bright side of life, will need lesser interest, while the pessimists and the clinging sort will demand higher compensation for their services of lending their savings.

§ 5. **Determination of the rate of interest.**—To see how the rate of interest on capital is fixed in the money market, it will be convenient to treat capital

as a commodity, the lenders of capital as its suppliers, and the borrowers as its buyers. The borrower's maximum in this case will depend on the productiveness of capital which will be calculated as has been done in the case of the farmer. Of course, this will differ from borrower to borrower according to his efficiency as a producer; it will be higher with the more efficient and lower with the less efficient producer. The minimum of the lender will depend on the rate of inducement necessary to encourage the lender to save and lend and thus postpone his enjoyment of capital. There will be some who would willingly save and lend at a low rate of interest, but higher rates will be necessary if the more unwilling savers are expected to save and contribute their savings for productive purposes.

Between the borrower's maximum and the lender's minimum a rate of interest will be arrived at as a result of higgling and bargaining between the two groups and at this rate of interest the total capital demanded and supplied will be equal. As in the money market there are many borrowers and many lenders, the equilibrium rate of interest will be equal to the net productivity of capital applied at the margin of profitability and will also be just sufficient to induce the marginal, or the least willing, lender to contribute his share of the capital.

If the rate of interest increases, the demand or capital will be contracted as otherwise the producers will be paying more interest than the returns they are getting at the marginal application of capital. If the rate of interest is lowered, the margin will be extended as the so far marginal application will leave a surplus to the producers who would find it in their interest to employ more capital.

Likewise, a rise in the rate of interest will increase the supply of capital as the present savers will save more, finding it more profitable to save, while

those who did not consider the old rate high enough, *i.e.*, sub-marginal savers, will start saving. A fall in the rate of interest will contract the supply of capital as the present savers will not find it as profitable to save while the marginal savers will consider the new rate too low for them to save at all. They will prefer to consume their wealth rather than postpone consumption at such a meagre inducement.

There may be cases when a rise in the rate of interest leads to a diminished supply, and a fall in the rate to an increased supply of capital. Those who desire to make a provision for a fixed annual income for future either for themselves or for their children, will feel bound to save more if the rate of interest is low as at a low rate of interest more principal is required to bring in a certain annual income. On the other hand, a higher rate of interest will fetch the same annuity on a smaller investment and the savers may be led to save less. For example, if a person wants to leave at his death cash or insurance money enough to bring a monthly income of Rs. 60/- to his family, he should collect or insure himself for Rs. 14,400 if the rate of interest is 5 per cent; Rs. 12,000 if the rate is 6 per cent; and Rs. 18,000 if the rate is 4 per cent.

§ 6. **Net and gross interest.**— *Net interest* or *pure interest* is simply the price paid for the use of capital. This net interest will be the same throughout the market at a particular time and it is this rate at which an equilibrium between demand and supply of capital is reached.

The payment which the borrower makes to the lender over and above the capital borrowed is generally a sum greater than what is called net interst. This total payment is called *gross interest* which is made up of the *net interest* and *remuneration for risk* and *management*.

In lending capital there are two kinds of risks involved—*personal risk* and *trade risk*. If the lender has any suspicion of a flaw in the character or the business morality of the borrower, his unwillingness to lend him will be greater than ordinarily it is in case of those who are noted for honesty and truthfulness in their transactions. The borrower *may* not intentionally pay, is the consideration which requires greater inducement or higher rate of interest at which the lender will think of lending out his capital.

Where there is no such danger of fraud or default, there may be the risk of the trade. There are certain trades which by their nature are liable to greater risks. Mining in a new area involves greater risk than, say, starting a cotton mill; and entering a new field of enterprise is still more risky. The borrower may not have any intention to default but his good intentions will not help the lender if the borrower loses his capital in the trade. Therefore industries involving greater trade risk will have to pay something more than what is needed for the mere service of capital, or net interest.

The third item included in gross interest is the earnings of management. Lending involves risks as detailed above and the lender has to undertake a lot of trouble in keeping down those risks. There is the question of finding the right party to whom to lend, settling the rate of interest, keeping the account, and then the necessary legal proceedings and finally the collection of the debt. All this has to be managed by the lender who makes the borrower pay a higher price for his loans extended to him.

§ 7. **Variation in gross interest.**—When the rate of interest varies from industry to industry or from individual to individual it is because different degrees of risk and trouble of management are involv-

ed which require different compensation. Net interest in all the cases at a particular time remains the same, but gross interest cannot be equal as long as there is inequality in risk and management involved in different cases.

It will not be difficult to explain why a cultivator has to pay exorbitantly high rate of interest while a city businessman escapes with a low rate, a private individual has to pay twice as much as to a joint-stock bank as the bank in its turn pays to the Reserve Bank for its own borrowings; the Central or a Provincial Government pays much less than a municipality or a district board. If the villager has to pay 24% but the Government only 3% on its loans, the difference is accounted for by the lack of security and cost of management in the former case as against perfect security and no trouble of management at all in the latter. As a matter of fact, the Central Government pays a rate of interest most nearly approximating to pure or true interest, while in case of any other person paying a higher rate, the excess should be considered as remuneration for risk and management.

Interest Rates in India

The Bank Rate in India is fixed by the Reserve Bank of India and at present stands at 3% per annum. It represents the rate charged by the Banks on demand loans against Government securities only. Advances on other securities or discounting of first class commercial paper are granted at a slightly higher rate. In the absence of an organized money market in the country, the Bank rate fails to operate outside such places as Calcutta, Bombay, Madras and Cawnpore, and the rates charged in mofussil towns and villages are much above it.

There are four well-marked peculiarities of interest rates in India :

(*i*) There is no uniform rate of interest prevailing over any considerable part of the country, the reason, as pointed out above, being the absence of an organized and well-developed Indian money market.

(*ii*) The interest rates fluctuate from locality to locality, and specially heavily between commercial towns and villages.

(*iii*) They fluctuate from season to season in the same locality due to fluctuating demand and supply of capital. During the monsoon months they are low, but rise after the harvesting of important crops like cotton and wheat when these have to be financed. Even commercial banks grant accommodation at less than the official Bank rate during the slack season.

(*iv*) The rates of interest are rather high as capital in the country is inadequate and banking facilities are lacking. The village rates of interest are specially usurious as the mahajans enjoy almost monopolistic control and the supply of credit by cooperative societies is meagre and for short term.

EXERCISES

1. What is interest and why is it paid? Show that interest is the reward for waiting. Do you think all savings will cease if no interest were paid?

2. Analyse the conditions of demand for, and the supply of, capital, governing the rate of interest.

3. Distinguish between Net and Gross interest and account for the disparity between them. Which of the two is more variable and why?

4. Analyse the causes that lead to differences in the rate of interest (a) in the same market; (b) in different markets; (c) for short and long periods.

5. Point out the case of any borrower paying almost the net interest. Explain the reason of this privilege. Why has the Government of India to pay 6% during the War when before the War it could borrow at 3½%?

CHAPTER VI

MOBILITY OF LABOUR AND CAPITAL

§ 1. **Mobility of Labour.**—The movement of labourers or producers from place to place or occupation to occupation is called the mobility of labour. It is of two kinds: *local* mobility, and *occupational* mobility. Local mobility consists in the change of place alone, as when a village weaver, finding his business dwindling in his native place, goes to a neighbouring town in the expectation of better prospects. The occupational mobility takes place when a person leaves his less remunerative occupation and adopts a new and a more paying one. The occupational mobility itself is of two types, *horizontal* and *vertical*. This distinction is based on the consideration whether the new occupation taken up by labourer is of the same grade or status as the one given up, or it is of a higher or lower grade. If the new occupation is of the same grade as the original one it will be an instance of *horizontal mobility*, as when a carpenter becomes a blacksmith. The newly adopted occupation may be of a higher or a lower grade as when a carpenter becomes a teacher or is forced to earn the living of a coolie. In either of these cases we find instances of *vertical mobility*. It is possible to find an instance of both local and occupational types of mobility in a single case when a person changes both the locality and the occupation, just as a carpenter at Bareilly may give up his business there and may work as a coolie at Lucknow.

On the basis of time, mobility may be either *permanent* or *seasonal*. Permanent mobility results

when a labourer leaves his home for good and settles at a new place with a view to reside there permanently. A seasonal mobility is that when a worker leaves his place temporarily or from time to time and returns when his employment terminates.

Everywhere in India the two types of permanent and seasonal mobility are to be met with. Some cultivators give up their occupation on the land either because they have pawned away the entire land without any hope of redemption, or because there are too many persons at home to depend upon a small holding, and take up new jobs in the distant towns where they reside permanently. There is yet a considerable number of people who visit the neighbouring towns in-between the seasons when there is practically no work in the villages and try to add a little bit to the family income. This intermittent supply of workers is responsible for very cheap though unskilled labour available at times in the towns. Indians have also emigrated on a temporary basis to foreign lands as indentured labour for a period of time though some of them made their homes and settled there permanently because the new conditions suited them and their occupation.

Very poor material is available with which to gauge to any degree of approximation the other phase called the occupational mobility. In India occupational mobility must have been very rare in olden days of caste supremacy when one's occupation was unalterably fixed by his birth. But in modern times the contact with Western civilization has weakened the bonds of castes and developed individualism and therefore to that extent encouraged occupational mobility. Though in the absence of organized investigation it is difficult to say to what degree mobility from occupation is taking place today, yet it is obvious to all that such a mobility does take

place more frequently and more appreciably than before.

Just as it is of importance to note in case of local mobility whether the movement is permanent or seasonal and inter-regional or inter-national, similarly in case of occupational mobility it is interesting to learn as to how many grades up or down, the mobility has taken place. As is known from common experience in life in India, majority of people in the villages pursue the same occupation as was followed by their forefathers though a greater movement is seen among urban population. Again, it is easier to move down than to move up an occupational ladder and it can be safely assumed that of those that move from grade to grade, a greater percentage is composed of those that move downward than those that move upward. As far as the degree of movement downward is concerned, there is no limit up to which one can fall; the uphill task is more arduous and seldom performed. It will be easier to find a graduate clerk becoming a hawker, when thrown out of employment, than a district magistrate. Even in England, where a person's career is not checked by considerations other than those of unfitness and inefficiency, more people move downward and to a greater degree than those that move upward and to a lower degree.

§ 2. **Mobility of Labour in India.**—In India, mobility of labour is not governed entirely by economic considerations. Easy and cheap means of travel and communications combined with prospects of higher remuneration, that will suffice to lead to heavy mobility in more advanced countries of the West, will fail to take much effect in this country because here the play of economic influences is narrowed by social prejudices and beliefs, and individual ignorance and conservatism.

(*i*) *Caste*.—With a majority of people, the mobility of labour is still a matter of caste. The high caste people, and others also who stick to caste observances and practices with more faith than reason, will not leave their homes even for the sake of rich remuneration just because they are afraid of interruptions in their daily routine or even loss of their caste. With lower caste people these considerations do not weigh heavily and they are found moving much more easily and frequently to places hundreds of miles away from their native places. Chamars, Ahirs and even some Kshatries from certain districts of U.P. are serving as peons, darbans and chowkidars in as distant places as Calcutta and Bombay. With the growth of education these caste prejudices are breaking down, yet it will be long before Hindus begin to move as much as non-Hindus do, who are not burdened with such prejudices.

(*ii*) *Ignorance* or want of knowledge among the workers is another factor. They do not know whether at a new place or an industry there really is a demand for their labour. Advertisements for situations in the newspapers can help only a few literate ones; while for the mass of ignorant people there are no means to acquire such an information. Even the movement of skilled labourers is hindered in the absence of well-organized labour exchanges which can serve both the employers and the employees by establishing contact between them. The result is that whereas industries in some places lose for want of adequate and efficient labour supply, the labourers of the right type at other places suffer for want of employment.

(*iii*) *The expenses of movement* are at times much beyond the means of poor labourers. The cost of movement of self, the family, and tools and instruments with some of them may be prohibitive as it

happens with a cultivator. Of course, this question does not worry much the factory labourers who are expected to join factories only with their skill, and counts for little with artisans who are encumbered only with a small set of tools. Moreover, a temporary unemployment at a new place adds to this financial burden and increases the worker's unwillingness to move. This initial unemployment with necessary expenditure forms a special consideration with labourer seeking a job in the first instance.

(*iv*) Sometimes there is a loss of efficiency if it depends upon the environments and the acquaintance with the tastes and means of the customers. A farmer removed from his native place and planted in a strange land with totally different soil, climate, rainfall and rotation of crops, will greatly suffer in this respect. An artisan may have to face only some difficulties due to a change of customers, while a factory labourer may find almost no change in the type of management at a new place.

(*v*) Then the love of home and native place, of friends and relations specially in a joint family system, may be too strong to shake off even if there be sound economic reasons justifying a move. People prefer to earn annas four a day as farm labourers rather than ten annas a day in a city factory just because they feel compensated for this loss of economic well-being by the affection of those whom they love. The joint family system acts as a specially heavy drag in the mobility of labour in this respect.

(*vi*) Finally, there is inertia or natural aversion to be always on the move. Unless a person is grossly dissatisfied with the conditions of work and its remuneration, he would not like to change his occupation or its scene and unsettle his settled life. Indians with a less materialistic bent of mind, value simple yet peaceful life more than rich monetary

gains involving too frequent changes, and prefer to stick to old means of living and familiar surroundings. As a result there is less mobility among them than among more adventurous people of the West.

§ 3. **Mobility of Capital.**—Capital is more mobile than labour. While dealing with mobility of labour it was noticed that it was retarded by certain factors of social and personal nature. With capital such factors do not matter. Capital being lifeless, it has no likes and dislikes, no attachment to people and surroundings, and it will resist transference under any circumstances. It neither suffers from inertia nor has any love for any land. At the same time the question of the loss of efficiency does not arise as inherent efficiency capital has none. Given assurance of full security and certainty of higher gain, capital will flow much more readily than labour.

The cost of movement of capital is very low and the speed of transference enormous. Money-orders and postal orders, insured covers, hundies, bills of exchange and banker's drafts, telegraphic and radio transfers, all have conferred on money cheap mobility as quick as news can travel. Thus funds can be transferred between two markets as distant as Bombay and Calcutta or London and New York as often as there is a justification to do so, and that too at a nominal cost. It also shows that capital requires only a small difference in the rates of interest prevailing in two markets to set enormous sums of money moving to and fro. Even a quarter of one per cent higher rate is an incentive strong enough to attract capital from one end of the globe to another.

Mobility of capital is great and unrestricted as it can move, unlike labour, unaccompanied by its owner who stays at home and invests his capital

abroad and in different industries. The quick means of communication and remittances have united the entire world into one market for investment of capital and facilitated its mobility astonishingly. The investor can invest his money through banks and brokers and realize interest and dividend through them very easily and cheaply.

Yet, security of investment is an essential condition of mobility of capital. None would like to invest money in those countries where a new government is likely to repudiate the loans contracted by its predecessor or in China or in the states of South America which are torn by internal wars. A fabulously high rate of interest may induce the more adventurous people to invest their capital there, but the more prudent and cautious of the investors would prefer to earn a steady though low rate of interest in a peaceful country than risk the very existence of their capital in disturbed regions.

Institutions like banks that remit money from place to place, and stock exchanges that provide the media of investment, help in the mobility of capital. The services of newspapers and news agencies and of telegraph and telephone that broadcast information on money and its market are essential. In the absence of such knowledge no one will even think of moving his capital.

But all capital is not equally mobile. Cash or investment capital in securities, which can be immediately sold and their value realized, is more mobile than fixed or frozen capital. Every-day stock market transactions furnish instances of mobility of liquid capital. Higher dividends in sugar industry will lead to a flow of capital into sugar shares from those of cotton or glass if the latter are paying lower dividends. The investors holding cotton or glass shares will sell them away and with the money so

realized will buy sugar shares. Geographical mobility of capital is brought about by purchasing the shares of industries of foreign lands.

Fixed capital is slow to move. As a matter of fact, it is absolutely immobile in short period. Money invested in capital goods like buildings, machinery, canals and railways cannot move until their value has been recovered through depreciation funds. To realize their full value they have to be worked out fully. Mobility will be incomplete if they are sold and even their sale will mean a heavy loss to their owners. There is no other way of moving capital from such fixed investments, as machinery cannot usually be used for purposes other than those for which it was specially constructed.

There is greater scope of mobility of capital in those countries which are developing their industrial organization. Small-scale industries and businesses requiring small capitals like agriculture, do not provide such a big scope, unless the methods employed and instruments used so far in these industries have been obsolete and uneconomic—agriculture in India, for instance—and improvements have recently begun to be introduced in it.

§ 4. **Mobility of Capital in India.**—India is industrially backward, and whatever progress has been made in the development of important industries like mining, jute, tea and government enterprises like railways and canals, is due mainly to the investment of foreign capital. On March 31, 1937 the liabilities of the Government of India to foreigners amounted to Rs. 503 crores paid up since then which had made the construction of railways and canals possible. It is difficult to arrive at an exact figure representing foreign investments in mining, petroleum refining, tea and jute industries which are dominated by foreign capital, yet a conservative

estimate will put it as Rs. 100 crores. As against this sum, the investment of indigenous capital in various enterprises including all kinds of privately owned industrial concerns, works out at Rs. 85 crores. This preponderance of foreign capital over Indian capital is more marked in shipping, plantation, banking, insurance and commerce where against about Rs. 200 crores of Indian investment foreign investments amount to nearly Rs. 500 crores. Clearly the external capital occupies a dominating position in Indian industries.

§ 5. **Lack of Mobility of Indian Capital.**—The reason is the lack of mobility of Indian capital which is proverbially *shy*. This shyness is due to following causes :

(*i*) The hoarding habit among Indians persists in spite of the security of life and property having been well established under British administration. Jewellery and trinkets still constitute the main form of savings by the bulk of population mainly due to social prestige attaching to this form of luxury. India has been called the sink of precious metal as since 1881 over Rs. 1200 crores worth of it was imported into the country. Though since September 1931, the process has been reversed and she has lost over Rs. 375 crores of gold, a big amount still remains there to be cajoled into industry only if sufficient encouragement is coming forth, as has happened with the rapid expansion of sugar industry.

(*ii*) Banking has been inadequately developed. The deposits with commercial and joint-stock banks alone amounted to Rs. 479 crores in 1943; with the Post Office Savings Bank Rs. 64·2 crores; the deposits and working capital of Cooperative Societies were nearly Rs. 117 crores; while private bankers may be taken to hold at least Rs. 50 crores. If the banking facilities are developed and public opinion educated

by propoganda, as it is done in England by starting savings campaign with the patronage of the royalty, huge amounts can be tapped and then utilized in industrial and agricultural expansion.

(*iii*) Confidence of public in the success of banks and industrial concerns is lacking due to past failures. It should be strengthened by expert and efficient management of these institutions by persons of ability and integrity. If it is done, industries will not starve due to lack of capial.

(*iv*) Enterprising spirit is wanting among the people. Industries in India have been supported by indigenous capital only when foreign capital and management have proved them to be safe after long working. Except the cotton and sugar industries, everywhere else even now Indian capital is slow to enter and assert itself. This lack of enterprise will go but slowly as conservatism appears to be a national characteristic in matters economic as much as social.

(*v*) The Government of India's lukewarm support to Indian industries is responsible to some extent for retarding profitable investment of national capital. The policy of discriminate protection assured the future of matches, Iron and Steel, cement, paper, sugar among others and Indian capital poured into these with gratifying results, yet enterprises like shipping, transport, glass, chemicals and many more have been trying with insignificant or no success at all in winning protection against foreign competition or at least an equal favour with them.

The above discussion unmistakably points to the conclusions that (*a*) in India there is no scarcity of capital; (*b*) if adequate facilities for the investment of savings be available, capital will issue forth from its hiding place; (*c*) the government of the country should assure reasonable prospects for industries by granting them protection, and (*d*) the management

of these concerns must lie in the hands of honest and efficient persons who can win the confidence of the people.

EXERCISES

1. What is mobility of labour? Explain its various forms and show that it is a leveller of wages.

2. Why do farm labourers in Indian villages prefer their wages of four annas a day to eight annas a day they can earn in the neighbouring cities? Why are they not able to take advantage of such opportunities?

3. Can you suggest why Indian labour is so slow to move? Account for the difference in the mobility of (a) a farmer, (b) an artisan, and (c) a factory worker.

4. Why is capital more mobile than labour? Does every form of capital enjoy similar degree of mobility?

5. "Indian capital is proverbially shy." Comment on the statement, and suggest means to remove that shyness.

6. There can be a general rate of interest. Why? Account for the widely different rates of interest prevailing in different places in India.

CHAPTER VII

PROFITS

As popularly understood, profits mean excess of receipts over expenses in a business. Here it is immaterial whether a producer contributes any other factor apart from enterprise or not. Irrespective of the fact that an individual producer may be owning the entire capital invested in his business or he may be his own landlord or his own manager, or all these at the same time, the excess of money realized in the business over expenses in the shape of cost of raw material and wages, will be called profit. The indefiniteness of this meaning will be clear from the fact that the income of a barber, after paying for the little depreciation on his instruments, will be called profits as also the income of a big partnership business paying enormous wages and interests bill. But really speaking in the first case they are more of the nature of wages while in the latter of the nature of salaries and profits really so called.

§ 1. **Gross and Net Profits.**—In economics a distinction is made between gross profits and net profits. If from the entire receipts of a business are deducted the expenses of production, *i.e.*, money payments made to outsiders for all kinds of services rendered to the business, the remainder is termed as gross profits. If from gross profit a deduction is made for the remuneration of the employer for his own contributions of land, labour, capital and organization, *i.e.*, for normal profits, the residue is called net profits or simply profits.

§ 2. **What is Profit?**—Profit is the reward for enterprise. This should be distinguished from remu-

neration for organization. Organization can be transferred to the managerial staff who are paid salaries which in their nature are similar to wages paid to other labourers, but enterprise cannot be separated from the owner-producer. A person who has no capital cannot undertake any risk. A manager as such, has no capitalistic interest in the business; he simply organizes or co-ordinates land, labour and capital and is paid a contract-wage for his service. The remuneration for enterprise is not paid on a contract basis. It is a residue left after everybody else has been paid on contract basis. In the case of an enterpriser being also an organizer, the residue may count as the payment for both organizing skill and risk but both these can be separated and should be understood as independent items.

§ 3. **Wherein does the risk lie?**—An entrepreneur makes a forecast of the receipts and expenditure of a business before actual production. The receipts are calculated on the basis of the market conditions, and prices that will obtain in the near future when entrepreneur will be putting his supply in the market. On that basis he plans his business; he decides on the goods or services he is going to supply and the scale of production. This being settled, he proceeds to bring together the remaining factors of production and enters into a contract with the agents of production to pay them a definite rate of remuneration for their services. As has been explained before, his guide in such contracts with the landlord, labourers, capitalists and managers is the prospective net marginal productivity of each factor of production. If his forecast of this productivity of factors comes out right and also the expectation of price which he will realize on his produce, it is well and good and the entrepreneur makes a profit. But if either the prices at

the time of disposal of goods are low or the productivity of the factors turns out to be less than expected the entrepreneur will suffer a loss.

§ 4. **Factors which create risk.**—Whatever affects the prices of a commodity through its demand and supply, creates an element of risk in the business of that commodity. If there occurs a *change in fashions* and an article so far held in popular favour loses in its demand, the price will be reduced and the producers may suffer a loss. On the other hand, a favourable turn in fashion or custom will increase its demand and raise the price and bring handsome profits to the producers. On the supply side, discovery of a *substitute* will adversely effect the prosperity of the business in the original article as the manufacture of artificial silk has reduced the profits of real silk industry and the use of paper bags has lowered the profits on gunny bags. It is possible that the machinery which has already been installed may be rendered obsolete or out-of-date by a newly *invented process* that can turn out much cheaper goods. It will spell loss to the old producers.

Improvements made in the means of transport and communication and the *discovery of new markets*, extend the sale of the goods and mean more profits. Similar is the result of a general rise in the prosperity of the old customers of a business. But if new firms start business and begin to compete in the markets which were solely held by other producers, the latter begin to suffer.

If *strong foreign competition* has to be faced, the profits are reduced much more heavily. Lancashire was controlling till the War the entire supply of cotton yarn and piece-goods imported into India. The War gave an impetus to the development of Indian cotton industry and Japan also got an opportunity to improve her cotton industry. Lancashire

has been, therefore, facing the double-sided competition in Indian markets and losing much of its business.

Labour troubles like *strikes* and *lock-outs* seriously reduce the supply and increase overhead charges. *Political unrest* may make marketing a very difficult and risky business as in China and some of the modern European states. Boycott and political sentiment may lead to an unexpected increase or diminution in the demand for goods as happened in India in 1930 and China in 1932. *Natural calamities* like fire, floods and earthquake disturb the entire system of production and upset the market equilibrium.

All these factors create risks. Risks like those from fire or seas can be insured against but not the rest and they have to be borne by the producers.

§ 5. **Inequality in profits.**—A greater inequality is to be found in profits than the inequality in wages or in interest. Mobility of labour and capital helps considerably in equalizing wages or interest on capital engaged in different businesses, but in case of profits there being a greater scarcity of enterprise and little chance for mobility, vast difference is met with from an individual to an individual and this difference has a tendency to perpetuate itself due to certain reasons.

The first is the lack of capital with people in general. As has already been pointed out, no enterprise is possible without capital, the comparatively poor producers cannot have much to risk. 'No risk, no gain' principle is applicable to business with greater force. Even if the poorer enterprisers borrow capital in good quantities, they will not dare risk it so much as an entrepreneur who owns his capital. The rich enterpriser risks his capital and makes profits which go to increase his capital in future and his power to risk further. Thus the

inequality in enterprise and consequently its remunerations go on widening.

The second reason is that for the success of a business the enterpriser has to establish a goodwill. He may start with buying one, but such goodwill will not be substantial as otherwise why the original businessman should think of selling the goodwill of his business. At any rate, the entrepreneur, who starts with a bought goodwill, has better chances of prosperity than one who has to create one for himself. This latter enterpriser has to spend considerable sums on canvassing and advertising before the prospects of the business brighten up. If they do not, he suffers.

Another factor which makes for the success of an interprise is the knowledge, not only of the tastes and fashions of the consumers and technicalities of production, but of the inner secrets of the business itself which are jealously guarded by the ring dealers in a commodity. Until he is admitted into that circle, and he has to hang on for pretty long for that admission, his success will be more precarious than certain. All enterprisers do not succeed in that; hence the inequality in profits.

EXERCISES

1. Explain the term 'Profits.' Why is the payment of profit necessary in the economic system of today?

2. Analyse "profits" into its various constituents. What function does profit perform in industry?

3. Make a list of all the items of cost of production of a village weaver. How will you determine his profits?

Will you call the income of an investor as wages or profits?

4. "A" establishes a small factory for crushing oilseeds with a capital investment of Rs. 50,000. At the end of the first year he realizes Rs. 12,000 from the sale of oil excluding the cost of labour and raw materials. Under what heads should this amount be apportioned and why?

5. What does 'gross profit' consist of? Enumerate the factors that create risk and make the existence of profits necessary.

PUBLIC FINANCE

PUBLIC FINANCE

The state has always been recognized as an essential institution of an organized society. It is necessary not only for the preservation and progress of social structure but also for the growth and prosperity of economic life. It provides peace and security, the two conditions indispensable for economic well-being. The functions of a government have varied according to the needs and requirements of peoples at different stages of their history. But due to greater complexity of our social, political and economic life these days the functions of the state have also grown more numerous and more complicated.

§ 1. State Functions.—

A government has to perform two sets of functions: Primary and Secondary. The primary group includes (i) Defence of the country against naval, aerial and overland invasions; (ii) Maintenance of Law and Order in the country with the help of the police, judiciary, prisons and convict settlements; (iii) Civil administration, i.e., maintenance of legislatures, secretariat, civil services, heads of government and arranging for the collection of taxes and other sources of the state revenue; and (iv) Debt service, floating of the government loan and arranging for its repayment and periodical interest. The secondary group of functions includes (i) Social services like education, medical and public health, unemployment insurance, famine relief and the like; (ii) Public undertakings, i.e., commercial enterprises and public utility services like railways, posts, telegraph and telephones, irrigation schemes and supply of water, gas and electricity; and (iii) Miscellaneous items including pensions, refunds and other minor items.

A government worthy of its name must efficiently perform the primary functions. In addition, people expect the state to undertake not only what are called the nation-building activities like education, etc., but also such matters of social and economic reform as temple entry, marriage regulation, redemption of debts of individuals and protection of the industries of the country. As a matter of fact, people are delegating to the state the powers and functions which originally belonged to private bodies and are thus increasing the responsibilities of the government and its powers to interfere with, regulate and control private lives.

§ 2. **Public Finance**.—For the performance of these functions the government must have funds; and the greater the functions and responsibilities of the state, the greater will be the power needed by the state to realize the necessary funds. These funds will of course be spent on the people for their benefit. Under Public Finance is studied how the public authorities secure their necessary revenue and how they spend it in performing their governmental functions.

§ 3. **Public Revenue.**—The sources of revenue of a state are:—

(*i*) *Public property* like forests, crown lands, and mines yield regular income from the sale of forest produce, rent on land and royalty on mines.

(*ii*) *Commercial Enterprises.*—The state usually owns productive and distributive enterprises like railways, post office, telegraph and telephone and supply of water, gas and electricity. It supplies goods and services and charges price for the same from the people enjoying them. These enterprises are government monopoly

and no private bodies are permitted to compete with the state in these lines.

(*iii*) *Special Assessment.*—Special services like registration are offered to the people who accordingly pay for these services.

(*iv*) *Taxes.*

(*v*) *Other items like fines, penalties, contributions* and *tributes.*—Fines and penalties are not imposed with a view to increase the government revenue but to punish the breakers of laws of the land. Revenue from these items is only an incidental gain to the state. Contributions to the state funds are made by the public-spirited persons as voluntary gifts for purposes of social benefit like education, medical and others or to assist the government to meet an emergency like famine, floods and war. Tributes are received from dependent states that in recognition of the protection extended by the paramount power as the Government of India receives tributes from Indian states.

§ 4. **Public and Private Expenditure.**—There are certain marked differences between public expenditure of state revenue and individual expenditure of his income:

(*i*) Whereas an individual aims at keeping his expenditure within his income, a state must secure the necessary funds to perform its duties. That is to say, a person cuts his coat according to the cloth, but a state has to get the cloth big enough to produce the coat. In case the ordinary revenue falls short of the expenditure, a state has to borrow even for unproductive purposes like war and famines.

(*ii*) Savings are an essential feature of an individual's budget, but a public body follows the aim of balancing the budget or equalizing revenue and expenditure. Surplus budget means that the revenue exceeds the expenditure. Such budgets are indications of the solvency of the state but should not be recommended as they are likely to induce the authorities to become extravagant. A deficit budget showing expenditure in excess of revenue, on the other hand, compels the authorities to exercise economy and is preferable to a surplus budget.

(*iii*) An individual expenditure is guided by the motive of the maximum personal gain while the state expenditure aims at not benefiting particular individuals or sections of the population but conferring the maximum of benefit on the country as a whole.

§ 5. Tax.

Tax has been defined as a compulsory contribution from the subjects to the state for participation in the common benefits of protection of life and property that the state confers on all, and not for any special advantage resulting from this payment to the taxpayer. The essence of a tax is that there is no implicit or explicit understanding between the taxpayer and the public authority for conferring any specific benefit or advantage by the government on the subject for the tax he pays. The amount of tax paid bears no relation to the benefit the taxpayer may receive. A rich man, for example, paying ten times income-tax cannot claim nor expect to receive ten times the benefit enjoyed by the poor man.

Tax is not a price. Price is paid for the services of a commercial nature rendered by the state and is proportionate to the amount of services received, as the price paid for postage stamps, railway tickets, and gas and electricity consumed in the house. The pay-

ment of tax is not in lieu of any such specific services rendered by the state.

§ 6. **Tax, Fees and Special Assessment·—**

A fee is a payment made for the special service, of a non-commercial nature, rendered by the government as court-fees, stamp-fees and licence-fees.

A *special assessment* is a contribution levied for special benefits resulting to a person's property, and is proportionate to the special advantages so received. The construction of a park will benefit the inmates of the houses in its immediate neighbourhood by removing congestion, providing more wholesome air and playing grounds for the children. A fee charged because of these special advantages to the people will be called special assessment.

Thus while fees and special assessments art paid for special and direct services rendered and improvements made for the benefit of the payers, taxes are paid by the people for the benefits which cannot be traced to particular individuals but are supposed to be equally beneficial to all.

§ 7. **Canons of Taxation.—**

Adam Smith laid down Equality, Certainty, Convenience and Economy as the four canons of taxation to which the later writers have added the canons of Productivity, Elasticity and Simplicity.

(*i*) *Equality*.—The canon of equality does not mean that all whether rich or poor should pay an equal amount of tax revenue but that the burden of the taxes on different classes of people should be equitable that is justly distributed. There is no justice or equity if the rich and the poor have to pay the same amount as an equal contribution from the poor means greater contribution in terms of sacrifice than that imposed upon the rich. As a matter of fact, to ensure equality

of sacrifice the rich should not only pay more tax money than the poor, but they should be made to pay proportionately more. This object is achieved by buying a progressive tax like the Indian income-tax whose rate increases with increase in the income of the taxpayer, the rate being 9 pies in the rupee for taxable income up to Rs. 5000 but 15 pies in the rupee for incomes up to next Rs. 5000.

(*ii*) *Certainty*.—The tax that each individual is bound to pay ought to be certain and not arbitrary. The time of payment, the manner of payment, the amount to be paid, ought all to be clear and plain not only to the contributor but also to every other person. The government should also be able to estimate with some accuracy the probable yield of a tax.

(*iii*) *Convenience*.—Every tax should be levied at the time, and in the manner in which it is most likely to be convenient for the contributor to pay. Indian taxes furnish good examples: the income-tax is deducted when the salaries are paid; land revenue is collected when the crops have been harvested; and taxes on commodities are realized as included in the price when the consumers are purchasing them.

(*iv*) *Economy*.—The cost of collection of a tax should be as low as possible so that the greatest benefit may accrue to the state from the amount of tax paid by the taxpayer.

(*v*) *Productivity*.—The tax should not only bring rich revenue to the state but should in no way reduce the productive capacity or economic resources of the country. It is on these considerations that exports from India are duty-free as otherwise Indian exports would be dearer and suffer in competition with the goods of other countries in foreign markets. Income-tax in India is both productive and harmless to business enterprise.

(*vi*) *Elasticity*.—The tax system should be so

devised that in times of emergency or with growing needs of the state, it should automatically bring higher revenue. The Permanent Settlement lacks this virtue as its yield has not increased with increase in the productivity of land.

(*vii*) *Simplicity*.—A tax should be plain and simple and intelligible to people in general.

§ 8. Direct and Indirect Taxes.

Impact Incidence and Shifting of a Tax.—The impact of a tax falls upon the person from whom the tax is collected in the first instance, while the incidence or burden of the tax is borne by the person who ultimately pays the tax. A person from whom the tax is collected in the first instance is not necessarily the person who bears the burden of it. He may be able to shift or transfer the burden on to somebody else. The impact of the house-tax falls upon the owner as it is realized from him, but if he shifts it on to the tenant and charges it from him by way of increased rent, its incidence does not fall upon the house-owner but upon the tenant as he ultimately pays it and bears the burden. Both the impact and the incidence of income-tax fall upon the same man as he pays the amount in the first instance and, because he cannot shift it, he bears the burden as well.

Direct Tax.—A direct tax is a tax imposed upon a person with the intention that he should also bear the burden of it as income-tax. Both the impact and incidence of a direct tax fall upon the same individual. He is not expected to shift the burden to anybody else.

Indirect Tax.—An indirect tax is a tax levied upon a person with the intention and expectation that he will compensate himself by shifting the burden on to somebody else. The impact and incidence of an indirect tax are expected by the taxing authority to fall on different individuals. The duty on match-

boxes is realized from the manufacturers who are expected and do succeed in transferring the burden to the consumers who ultimately bear the incidence in the form of higher prices in which the tax amount has been included.

If sometimes a person paying a direct tax succeeds in shifting it to someone else, the tax will not cease to be a direct tax; nor will an indirect tax become a direct one on account of the failure of the payer of the tax in the first instance to shift it to someone else. A tax is direct or indirect because the taxing authority intends the former not to be shifted but the latter to be shifted.

§ 9. **Advantages of Direct Taxes.**—

1. Direct taxes are convenient to the taxpayer as the amount to be paid and the time and manner of payment are known to him.

2. They are economical as the cost of collection is low specially when they are realized at the source as in the case of income-tax that is deducted from the salaries before they are paid.

3. They enjoy facility in collection as the taxing authorities can easily collect them like income-tax collected at the source.

4. They are highly elastic as the rates of the taxes can be easily raised to bring in more revenue to the government to meet an emergent expenditure.

5. As direct taxes are collected at the source, there is little or no chance of evasion.

6. They are equitable as the rich are made to pay more than the poor by applying to them the principle of progression.

7. They possess an educative value as they produce civic consciousness among the tax payers who begin to take keen interest in the manner in which the

tax revenue is spent by the state and become watchful and critical of the duties performed by it.

§ 10. **Disadvantages of Direct Taxes.—**

1. Direct taxes are disagreeable as the taxpayers know that they are losing a part of their income and feel this loss. This dislike is further increased if the rates are enhanced and there is likelihood of serious discontent spreading among the people as a consequence of heavy imposition.

2. They are discriminating against the rich as their incidence falls upon the rich alone who possess valuable property or high income liable to tax, while a big section of population composed of the poor is left free of these taxes. Incometax, tax on buildings and houses and others fall entirely upon the rich.

3. Direct taxes may impose unnecessary burden upon the payers as there are chances of wrong calculation of the income or the value of their property. In these circumstances the principle of justice cannot be maintained.

4. They lead to evasion and while people are detected in the act of evading the taxes, severe penalties are likely to be imposed upon them. Thus they may disturb the harmony of relations between the state and the taxpayers.

§ 11. **Merits of Indirect Taxes·—**

1. The great merit of indirect taxes is that they are *least irritating* or disagreeable. People paying them do not become even conscious of them and therefore do not feel the payment.

2. Moreover, because the amount of the tax is included in the price of the commodity people can pay them at the time most *convenient* to them. If they do not want to pay, they have only to postpone the purchase or go without the commodity.

3. They are highly *productive* if the base chosen is a group of articles of general consumption. Customs yield about Rs. 50 crores to the Central Government per year and are the most productive source of income to it.

4. They are also *elastic*, in times of prosperity as their increased rates do not cause undue hardship to the consumers of the commodities.

5. Finally, they are *equitable* as they bring about a just distribution of the tax burden by making the poor also pay towards the cost of the government.

§ 12. **Demerits of Indirect Taxes.**—

1. The *cost* of collection of indirect taxes is high as the process of assessment is a long one.

2. They are *discriminating* against the poor as a greater percentage of their income is spent on the commodities indirectly taxed. A poor person pays a higher percentage of his income as salt-tax than a rich one, though both may be consuming equal quantities of salt.

3. They encourage *smuggling* of the heavily taxed commodities. Attempts have been to evade the import duties on foreign goods by sending them to some of Indian States and smuggling them across the land border into British India. It is also a problem for British Indian provinces to guard their boundaries and prevent the smuggling of opium and narcotic drugs coming from Indian States.

4. They *harm industries* if the raw material is taxed as it results in a higher cost of production of the finished commodity that loses some of its sale in the market.

Indian Finance

§ 13. **Before the Great War.**—

Before the Great War there used to be one joint

budget for the Imperial and Provincial Governments. The revenue was allotted as follows:—(i) *Imperial Heads*—Land Revenue, Customs, Salt, Opium, Commercial Undertakings and Tributes, etc.; (ii) *Provincial Heads*—Civil Departments, Provincial Works, Provincial Rates, Education and Medicine, etc.; and (iii) *Divided Heads* like Forests, Excise, Stamps, Registration, etc., whose yield was divided between the Imperial and Provincial Governments. The land revenue formed the mainstay of Indian finance responsible for more than 50% of the total revenue while the customs yielded poor revenue.

This system of divided heads was the cause of constant interference by the Central Government and the provincial development was hampered as they were allotted poor sources of income, depended on the grants made by the Centre and had no independent powers of borrowing and taxation.

§ 14. **Montague-Chelmsford Reforms.**—Abolished the system of Divided Heads and introduced a new allocation of revenue and expenditure. The principal heads of revenue of the *Central* (Imperial) Government were customs, taxes on income including Super-Tax, Salt, Opium, other heads like tributes from native states and other items like Railways, Posts and Telegraphs, Currency and Mint, and Military receipts. The *Provincial* heads included Land Revenue, Irrigation, Excise, Stamps, Registration and Forests. The provinces were also empowered to impose, without the previous sanction of the Central Government, any of the taxes like succession duties, tax on non-agricultural land, on advertisement, amusements and gambling, etc. For other taxes the previous sanction of the Government of India was essential. The *Local Governments* could levy taxes on Land and Land values, Buildings, Animals, Vehicles, Trades and

Professions and Markets, Toll, Octroi, Water-Tax and Scavenging Tax, etc.

Thus the Provincial Governments became financially autonomous bodies and had the powers to impose new taxes and raise loans in the money market.

§ 15. **Meston Award.**—This clear demarcation between the Central and Provincial heads and transfer of Land Revenue and Stamps to the provinces resulted in the deficit of Rs. 983 lakhs in the Central revenue. The Meston Committee appointed in 1920 to investigate into this matter decided that the provinces should make contributions to help the Central Government to meet the deficit. Madras was to contribute Rs. 348 lakhs, U.P. Rs. 240 lakhs, Bengal Rs. 63 lakhs, Bombay Rs. 16 lakhs and Assam Rs. 15 lakhs. The provincial contributions imposed severe burden on agricultural provinces like the U.P. while the industrial provinces like Bombay were let off easily. This burden-some system was abolished in 1928-29.

§ 16. **The Reforms Act of 1935.—**

The Government of India Act of 1935 contains the following provisions for financial arrangement:—

Customs including export duties, federal duties of excise on tobacco and other goods manufactured in India like sugar and matches, duties on salt, taxes on income other than agricultural income, corporation tax, are to be levied and collected by the Federal Government. The duties in respect of succession to property other than agricultural land, stamp duties in respect of bills of exchange, cheques, promissory notes, insurance policies, etc., terminal taxes on goods and passengers carried by railway and air, and taxes on railway fares and freights are to be levied and collected by the Federal Government, not to form part of the Central revenues, but to be distributed among the provinces and federated states.

Thus the more productive heads were allotted to the Federal Government while the heads of Provincial revenue yield poor returns and are inelastic though the provincial needs under the provincial autonomy are expanding.

§ 17. **The Niemeyer Award.**—

The matter was looked into by Sir Otto Niemeyer who recommended in 1936 an immediate financial assistance to the provinces from the beginning of provincial autonomy. It was to be partly (*i*) in the form of cash subventions, (*ii*) partly in the form of cancellation of the net debt incurred previous to April 1, 1936, and (*iii*) partly in the form of distribution to the jute-growing provinces of a further 12½% of the jute tax, (50% of the tax on jute was already granted to the provinces) raising it to 62½%.

The annual cash subventions are as follows :—

To the U.P. Rs. 25 lakhs for 5 years only,

to Assam Rs. 30 lakhs.

to Orissa Rs. 40 lakhs,

to the N.-W. F. Province Rs. 100 lakhs, subject to reconsideration after 5 years, and

to Sind Rs. 105 lakhs to be reduced by stages after 10 years.

Sir Otto Niemeyer also recommended half of the proceeds of income-tax to be distributed among the provinces on the following percentage division :— Bombay 20, Bengal 20, Madras 15, U.P. 15, Bihar 10, Punjab 8, C.P. 5, Orissa 2, Assam 2, Sind 2 and N.-W.F. Province 1,—the contribution to be made after 5 years from the inauguration of provincial autonomy.

CENTRAL GOVERNMENT
Revenue and Expenditure

	Estimates 1945-46.	Crores of Rupees 1936-37.
Revenue.—		
Customs	55 25	5·2
Central Excise Duties ...	48·59	
Corporation Tax ...	88·67	
Taxes on Income (Other than corporation tax)...	100·83	15·3
Salt	9·30	8·9
Opium	1·27	0 5
Other Heads ...	·63	1·0
TOTAL—Principal Heads	304·54	76·9
Railways: Net Receipts ..	32 00	31·7
Post and Telegraphs ...	11·85	0·9
Currency and Mint ...	12·28	1·0
Civil Administration ...	2·26	0·9
Civil Works ...	0 66	0 3
Defence Services ...	16·42	5·1
Interest	1·44	0·6
Others	3·18	1·6
	384·63	119·0
Less-Share of Incometax revenue payable to provinces	23·29	
TOTAL ...	361·34	

	Estimates 1945-46	Crores of Rupees 1936-37
Expenditure.—		
Direct Demands on the Revenue ...	88;	4 2
Railways : ...	...	31·7
Post and Telegraphs (capital outlay charged to revenue. ...	·20	·8
Currency and Mint ...	1 70	·4
Civil Administration ...	27·55	11·0
Civil Works ...	2·47	2·5
Defence Services ...	394·28	50·6
Debt Services ...	33·95	12·7
Miscellaneous and Extraordinary ...	48·64	7·0
TOTAL ...	517·63	120·9

§ 18. Central Government.—

Heads of Revenue

Customs.—Customs include Import and Export duties. Export duties are taxes imposed on goods leaving the boundaries of India. The two important items on which export duties are levied are rice and jute, the duties on hides and skins having been abolished in 1934-35 and 1935-36 respectively. Most of the foreign goods entering India pay import duties except the instruments used in agriculture, dairy and poultry farming, paper-making materials, books, magazines, Indian currency coins, and a few other minor items. Import duties are either *revenue duties* imposed with a view to bringing an income to the government, the present general level operating in India being 25% with a surcharge of 20%; or *protection duties* imposed on those foreign goods against whose competition the growing and nationally important industries of the country are to be protected. Sugar and matches bear a high protective duties to the extent of Rs. 7/12/- per cwt. and Rs. 1/10/- per gross of boxes at the minimum. The import duties are regulated by the trade agreements* made with England and Japan. British goods enjoy a 10% general preference in India in return for similar preference allowed to Indian goods in England. A fresh tariff board has been constituted to consider the case for protection of 14 Indian industries and its conclusions are likely to affect import duties levied on a number of imported goods. Fresh trade agreements with foreign countries specially England and U. S. A. will further lead most probably to a reduction of duties all round with a view to expanding the world trade.

---

*See chapter on 'Trade' for further discussion.

Central Excise.—Before the war the central excise revenue was mainly derived from duties imposed on sugar and Matches manufactured in the country. Due to high protective duties imposed on these articles coming from foreign countries, their imports have dwindled and the loss of revenue to the Central Government is partly made up by excise duty on factory sugar at Rs. 3/- per maund and on khandsari at -/10/- a maund while matches pay at the rate of Rs. 2/- as the minimum duty per gross of boxes containing upto 40 match sticks per box. The war has seen the imposition of central. Exciseduties on betelnut, coffee, tea, tobacco. vegetable products, kerosene, motor spirit, tyres, steel ingots and coal cess.

The customs used to occupy the place of honour among the sources of revenue to Central Government but now the central excises bid fare to top the list. As against a comparatively small revenue of Rs.7·6 crores in 1937-38 their estimates in 1943-44 stood at Rs. 41 crores compared to customs revenue of Rs. 26 crores.

Taxes on Income.—Incometax is charged on incomes, other than from agriculture, of Rs. 2000/- or more per year. It is a progressive tax as the rate increases with a rise in income and is calculated on slab-system as given below. Due to the exhigencies of war, a 66 per cent surcharge is applied uniformly over all levels of income. Recently a 10% rebate has been allowed on earned incomes and no tax is charged on this portion, while the income from investments bears the full burden of the tax.

	Basic Rate. per rupee	Surcharge
Where the total income does not exceed Rs. 2000 :	Nil	Nil
Where the total income exceeds Rs. 2000 :		
First Rs. 1500	Nil	Nil
Next Rs. 3500	9 pies	6 pies
Next Rs. 5000	15 pies	10 pies
Next Rs. 5000	24 pies	16 pies
On the balance of total income ...	30 pies	20 pies

Super-Tax is levied on incomes in excess of Rs. 25,000, the rate rising from 12 pies per rupee to 84 pies per rupee on incomes exceeding Rs. 5 lakh. The super-tax is also liable to surcharge rising from 12 pies to 42 pies per rupee.

Corporation Tax.—It is a tax imposed on the corporations or registered companies doing business in India. The rate originally imposed was one anna per rupee, since increased to?

Excess Profit Tax.—Excess profit tax came into operation in 1940-41 to be levied on war profits above a taxable minimum of Rs. 30,000 earned since September 1, 1939, these excess profits to be calculated on the basis of a standard year to be so chosen by the assessee from among the financial years from 1935-36 to 1939-40. The rate at present stands at $66\frac{2}{3}\%$ plus the compulsory deposit of 19/64 of tax. An assessee can withdraw this compulsory deposit within 12 months of the termination of hostilities or 2 years from the payment of the deposit whichever is later. On that money he would get 2% interest.

Salt Tax.—It is a duty imposed on salt manufactured in India, the rate being Rs. 1/9/- a maund. Salt is a government monopoly in the sense that the exclusive right to manufacture salt for sale belongs to the government. On imported salt a duty of Rs. 1/10/6 per maund is imposed. There is no other tax so unpopular in India as this one, nor does any other salt touch the pockets of the poorest in the land so universally as the tax on salt which is an indispensable necessity for all. Public opinion has all along been strongly in favour of abolishing it all together.

Opium.—Opium is another government monopoly. The importance of this item has dwindled as the exports have vanished in pursuance of a policy adopted since 1926 by the Government of India to reduce the exports by 10% each year. China was

the chief purchaser of Indian opium. Now the income under this head comprises the price of opium sold to provincial government for consumption within their own provinces.

Other Heads.—The main item here is the tributes for the Government of India as paramount power, receives from the native states and agencies. The item will vanish as soon as the states join the Indian federation as units enjoying the privileges and undertaking the responsibilities similar to those of the British Indian provinces.

Heads of Expenditure

Direct Demands on the Revenue.—These represent the cost of collection of revenues from customs, central excise, incometax, salt and opium, etc. This item should be kept as low as possible so that the net income to the government from these sources may be maximised in accordance with the canon of economy.

Commercial enterprizes.—Railways, Posts and Telegraph and Irrigation are the chief commercial services rendered by the Indian Government. A separate Railway Budget is prepared and the net contribution made by the Railway services to the general revenue is the gain to the government. For the sake of budget accounting, net receipts are shown on the revenue side and the miscellaneous and interest calculated on the capital investments on railways is shown the expenditure side. The expenditure incurred in maintaining and running the Posts and Telegraph and Irrigation departments is shown against there head and includes likewise the interest and miscellaneous charges.

Debt Services.—The expenditure under this head represents the interest paid by the central government on its public debt in India. Before the war, a major portion of the item was paid for the

external debt which has now been paid up and India is no longer indebted to foreign countries. It may be noted that major portion, *i.e.*, 80% of the Indian debt has been incurred for financing productive enterprizes.

Civil Administration.—The expenditure under this head has been enormously increased in recent years and will in all probability be further increased with the expansion of the old departments and addition of the new ones. It represents the salaries of the staff of the Central Government, maintenance of the head of the government, central legislature, political department, scientific, educational and medical institutions and the expenditure incurred in governing the centrally administered provinces and areas like Ajmer-Merwara, Delhi, Coorg and Baluchistan. The Indian administration is one of the costliest in the world and is noted for high salaries and favourable allowances admissible to various Indian services.

Defence Services.—These include the expenditure incurred on the recruitment, training, equipment and maintenance of naval, land, and air forces both in India and foreign countries and of harbours, strategic railways and defence works. A very high percentage of the country's revenue was taken up by the defence services even in peace time. During the war, of course, the expenditure had to be increased for obvious reasons, and it is expected that as a result of demobilization rapidly going on these days and speeding up of the Indianization of all military services recently announced by the Commander-in-chief, the defence burden will be reduced to much lower level at an early date.

Civil Works.—This head includes expenditure on the construction and maintenance of the public buildings and roads under the charge of the Central Government.

THE GOVERNMENT OF THE UNITED PROVINCES
The Statement of Revenue and Expenditure 1945-46

Heads of Revenue	In lakhs of rupees	Heads of Expenditure	In lakhs of rupees
Principal Heads of Revenue		*Direct Demands on the Revenue*	
Land Revenue	656·5	Land Revenue	106·2
Provincial Excise	515·3	Provincial Excise	15 8
Stamps	212·6	Stamps	3·5
Forest	193 6	Forests	87·4
Registration	15·0	Registration	6 0
Irrigation (Net)...	197 9	Irrigation (Interest or Irrigation Works, etc.)	137·1
Other Taxes and Duties	146·6	Other Taxes and Duties	1·0
Taxes on Income	360 6	Charges on account of Motor Vehicles Act	16·6
Receipt under Motor Vehicles Act ...	16·5		373·6
—— ... —— ... ——	———	Debt service	81·5
	2314 6	Civil Administration :—	
Debt service	20·1	General Administration	190·5
Civil Administration (Justice, Jails, Police, Education, Medical, Public Health, Agriculture, Cooperation, Industries, etc.)	245·4	other Heads	1204 2
Civil Works	90 0	Civil Works	299·4
Miscellaneous	41·0	Miscellaneous	214·4
Extra ordinary	38·7	Extraordinary	363 1
		Total Expenditure ...	2726·7
		Surplus ...	23 1
Total Revenue ...	2749 8		2749 8

THE FINANCES OF THE PUNJAB

The Statement of Revenue and Expenditure 1945-46

Revenue Receipts		Expenditure charged to Revenue	
Principal Heads of Revenue	In lakhs of rupees	*Direct Demands on the Revenue*	In lakhs of rupees
Land Revenue (Net)	333·3	Land Revenue	63·0
Provincial Excise	328·2	Provincial Excise	13·7
Stamps	123·4	Stamps	2·9
Forests	83·7	Forests	74·3
Registration	20·4	Registration	1·5
Irrigation	605·6	Irrigation	226·8
Other Taxes and Duties	85·1	Other Taxes and Duties	9·4
Taxes on Income	186·3	Charges on account of Motor Vehcl1es Act	5·3
Receipts under Motor Vehicles Act ...	12·7		396·9
	1778·7		
Debt service	32·5	Debt Service	70·9
Civil Administration (Justice, Jails, Police and miscellaneous) ...	36·7	Civil Administration (General Administration, Justice, Jails, Police and Misce)	599·9
Beneficent Departments (Education, Medical, Public Health, Agriculture Cooperation, Industries, etc.) ...	120·3	Beneficent Departments	559·6
Civil Works	45·9	Civil Works	256·1
Miscellaneous	99·4	Miscellaneous	183·5
Extraordinary and Adjustments ...	474·0	Extraordinary	4·2
Total Revenue ...	2587·5		2071·1

THE FINANCES OF THE PUNJAB 1945-46

Revenue Receipts			In lakhs of rupees
Principal Heads of Revenue			
Land Revenue. Net	...	333·3	
Provincial Excise	...	328·2	
Forests ...	...	83·7	
Registration	...	20·4	
Irrigation (Net Receipts)		605·6	
Receipts under Motor Vehicles Acts	...	12·7	
Other Taxes and Duties		85·0	

Sources of Revenue

Land Revenue.—From ancient times land revenue has been the sheet anchor of Indian finance and even since the transference of this head from the central to the provincial government in 1919, land revenue is the biggest source of provinces. Yet this source has the demerits of being inelastic and uncertain. Being fixed for the settlement period ranging from 15 to 30 years, it cannot be increased in times of emergency even if the rise in the price of the farm produce may be justifying it. Moreover in times of unfavourable monsoons or other agricultural calamities like hail, frost and floods, remissions and suspensions are often allowed by the government thus creating uncertainty in its realization. Moreover, as the percentage share of the government charged on the rental assets from the landholders is uniform, the burden falls more heavily upon the poorer and smaller landlords than upon the richer and bigger ones. Better provision of irrigation facilities, wider

cultivation of commercial crops and introduction of better systems of agriculture will help to increase the productivity of land revenue.

Excise.—Provincial excise, as distinguished from central excise explained earlier, is the revenue derived from the manufacture and sale of intoxicating drugs and drinks like *ganja*, *bhang*, *charas*, toddy and liquors and from the fees of licences for their sale. The income under this head had begun to diminish on account of the policy of prohibition introduced in these provinces and it is expected that this restrictive policy of the government supported by popular prejudice against the use of intoxicants, and temperance propaganda, will result in progressive reduction in provincial excise revenue.

Stamps.—Stamp revenue is derived from two classes of stamps, commercial and judicial. Commercial stamps are affixed to all types of commercial agreements like deeds of sale and purchase, debts and mortgage, inheritance and assignment, insurance and bills of exchange and others. Judicial stamps are affixed on court papers of various sorts and civil suits on the basis of their valuation.

Forests.—The revenue under this head is derived from the sale of timber and other forest produce, grazing fees and licence fees for extracting minor products like bamboo, fire wood etc. Forests can yield much greater revenue if they are well conserved and better exploited. The establishment of Forest Research Institute at Dehradun in 1914 with its five main branches namely Silviculture (dealing with production side of forestry), Forest Botany, utilization, Entomology and Chemistry, and Minor Forest Products. has been improving the productivity of forests, and leading to better utilization of the products with correspondingly increased revenue.

Registration.—It is a fee charged on the bonds, agreements and deeds that are registered with the Government and the amount paid is in addition to the stamps affixed to them as explained above. Its amount corresponds with the value of the document registered. It is compulsory to register certain documents like gifts and transfers of immovable property.

Irrigation.—Revenue under this head is derived from the water rate imposed on the cultivators for water supplied to them for irrigation purposes. The net income from irrigation constitutes a very profitable source to the provincial governments, occupying second place among the major heads in the Punjab and third in the U.P., with the expansion of irrigation facilities as contemplated, this source bid fair to occupy the topmost position in the near future.

Other Taxes and Duties.—These are the taxes which the Provincial Government has imposed in its discretion as allowed since the Reforms, as taxes on entertainments, gambling and advertisement. Entertainment tax though only recently imposed in U. P. has proved an immediate success.

Other Heads.—Other Taxes on Income is the share from the proceeds of the taxes imposed on income and realized by the Central Government in the first instance but later on transferred to the Provincial Government. Motor vehicles also contribute to the provincial revenue in the form of duties imposed upon them. A cess is realized from the sugar factories on the basis of sugar manufactured and this amount is later on spent on the research and development of sugar cane and sugar industry. Provincial Government further receives a portion of the duties imposed by Indian Government on imports and manufacture of petrol, kerosene oil, spirits and

alcoholic drinks the portion of petrol duty being ear-marked for road development in the province.

Debt Service.—The income is from the interest on the loans given to municipal and district boards for the provision of public utility services in their respective areas.

Head of Expenditure

The heads *Direct Demands on Revenue*, like that of the Central Government, represents the cost of collection of revenue from Land, Excise, Stamps, Forest, Registration and Motor vehicles, and includes the salaries etc. of the provincial services employed in these departments. *Irrigation* and *Debt Services* need no comment. *Civil Administration* includes expenditure on general administration and on Justice, Jails and Convict Settlements, Police, Education, Medical, Public Health, Agriculture, Rural Development, Veterinary, Cooperation, Industries, Aviation, Scientific research and others. These are the nation building departments and naturally consume the highest percentage of the provincial revenue. In the years to come the plans of reconstruction and development will be undertaken and as there is enormous scope for future expansion in most of these directions, the expenditure is bound to multiply. Other items are *civil works* representing expenditure on the construction and maintenance of roads and buildings of the Provincial Government, on *Famine Relief* measures, *Pensions* and *Superannuation allowances* paid to retiring government servants and other miscellaneous heads.

Local Self-Government and Local Finance

§ 20. **Village Autonomy.**—Small village communities have existed in India from times immemoriai. They were run as small republics enjoying a large

degree of local autonomy since in those days of poor means of transport and communication little contact was established between them and the seat of government. The rulers were interested in the realization of their dues through their representatives and were content to leave the villages to manage their own affairs through the *Panchayats*. These bodies acted as courts of justice settling the disputes between the inhabitants; as administrative heads of the villages maintaining peace and order and managing the land, forests and the pastures for the common good of the community; and as defence council arranging for the protection of the village against the neighbouring hostile communities. But this autonomy disappeared owing to the establishment of local civil and criminal courts and revenue and civil organizaton under the British Government, the development of transport and communications, and the growth of individualism as a result of Western influences.

§ 21. **District Administration.**—

The process of British administration began in the time of Warren Hastings. The provinces were divided into Districts comprising an area of about 5000 square miles on an average placed under an officer called the Collector in the Regulation and the Deputy Commissioner in the Non-Regulation provinces. He is the backbone of British administration in India. His duties and powers are varied and all-embracing. As a Collector, he is responsible for the realization of land revenue and taxes and is assisted by Deputy Collectors, Tahsildars, Naib-Tahsildars, Qanungoes and Patwaris in this respect; he hears appeals from the decisions of the subordinate revenue courts. As a Magistrate, he enjoys first class powers and is responsible for the maintenance of law and order in the district, hears criminal cases of certain

types and enjoys appellate jurisdiction over subordinate magistrates. He has supervisional powers over the local self-government bodies like District and Municipal Boards, Local Boards and Notified Areas, and educational and other associations of public benefit.

There is a number of other important officials performing different functions in the district administration : a Superintendent in charge of the police, a Deputy Inspector or District Inspector of Schools to look after education, a District Medical Officer of Health in charge of the hospitals and dispensaries of the district, a Civil Surgeon as the head of the civil hospital in the district town; and an Executive Engineer who is responsible for Public Works, *i.e.*, roads and buildings. All these officers are directly under the provincial heads of their respective departments and work under the guidance of the Collector and District Magistrate.

§ 22. **Local Self-Government.—**

The system of centralized administration introduced by Warren Hastings continued unchanged till 1850 when an act was passed applying to the whole of India with a view to from *Municipalities* in the country. Much progress was not made till the time of Lord Ripon when in 1883-84 acts were passed that greatly altered the constitution, powers and functions of Municipalities and extended the application of elective system to them. The presidency towns of Calcutta, Madras and Bombay have their Corporations constituted under special acts, while the towns, too small to have a municipality, have their notified area committees for similar functions.

The duties and functions entrusted to the Municipalities in urban areas are in rural areas assigned to *district and local Boards*. Except in Assam, every

district in British India has a board with two or more subordinate sub-district boards, while there are Union Committees also in Bengal, Bihar and Orissa and Madras. These bodies are all elective and have their non-official chairmen.

§ 23. **Functions of Municipalities.**—Municipal functions are classed under four main heads of (*i*) Public Safety, (*ii*) Health, (*iii*) Convenience, and (*iv*) Instruction. They have to perform certain *obligatory* duties, *e.g.*, lighting, cleaning and watering of public roads, lanes and spaces like parks; protection against fire by maintaining fire engines, and fire brigades; checking of public nuisance, abatement of offensive and dangerous trades; prevention and control of epidemics by improving the sanitation and arranging for vaccination and inoculation; establishment of hospitals and dispensaries and provision for primary education; construction and maintenance of public roads, streets, buildings, markets, drainage and sewage works, latrines, slaughter-houses, wells and tanks.

The Municipalities may also perform their *optional or discretionary* functions as construction of new roads and streets, play-grounds and public parks, libraries, museums, halls, rest-houses and other public buildings, provision for education above the primary stage, planting of trees along the roads, taking census records of vital statistics and undertaking of public utility services.

§ 24. **Sources of Municipal Revenue.**—To meet the expenditure on the obligatory and discretionary functions the Municipalities need revenue which they can raise from the following sources :—

(*i*) *Municipal Rates and Taxes* like octroi, taxes on houses, land, animals, vehicles, trades and professions, tolls on roads

and ferries and visitors' tax from people visiting Municipalities by railways, water, light and conservancy rates for the services supplied to the public;

(*ii*) *Realization under special acts* like income from cattle-pounds, license on hackney carriages and licensing of the sale of kerosene and drugs, etc.;

(*iii*) *Revenue derived from Municipal property and powers apart from taxation* is received in the form of rent of Municipal lands, buildings, rest-houses or sarais and dak-bungalows, markets, slaughter-houses, fees from educational and medical institutions, sale of water, etc.;

(*iv*) *Grants from Government* for educational and medical purposes; and

(*v*) Miscellaneous including the contributions from private individuals, interest from investment of Municipal funds and loans, etc.

	Rupees
1. Balance in hand at the close of last year	6,42,162
A. Municipal Rates and Taxes :—	
2. Octroi	11,53,682
3. Tax on the annual value of Builings & Land	2,00,654
4. Tax on Animals and Vehicles.—	
Vehicles	22,846
Animals	2 862
5. Water Tax	3,52,340
6, Visitor's Tax	1,48,290
	18,80,674
B. Realization Under Special Acts:—	
Pounds 3021; Hackney carriages 46423 etc.	49,402
C. Revenue derived from Municipal Property and powers apart from Taxation	
(*i*) Rent of lands, houses, sarais, dak-bungalow 19006	
(*ii*) Sale of land 4183	
(*iii*) Conservancy Receipts... ... 4087	

	Rupees
A. General Administration and Collection charges:—	
1. General Administration (Office, Inspection, Hony, Magistrate ..	53,313
2. Collection of Taxes including warehouses	1,10,959
Survey Refunds, etc.	404
	1,64.676
B. Public Safety:—	
(*i*) Fire (Fire Engines, buckets, etc.) ...	6974
(*ii*) Lighting	55,236
(*iii*) Rewards for destruction of wild animals, snakes, dogs	487
	62,697
C. Public Health and Convenience:—	
(*i*) Water-supply	3,05804
(*ii*) Drainage	92,692
(*iii*) Conservancy—Subordinate Establishment	1,70,734
Cost of feeding of livestock ...	91,488
Plant and contingencies ...	18,702
Road watering ...202893	9,828

(*iv*) Fees and Revenue from Educational Institutions	17,765		
(*v*) Markets	56,831		
(*vi*) Sale of water (Meter Rent Sale proceeds. etc.)	68,094		
(*vii*) Other and Misc. like Registration-fee. etc. etc. ...	20,280		
			1,90236
D. Grants and contributions:			
Education	25,497		
Roads	88,631		
Fines etc....	12,096		
			1,26,224
E. Miscellaneous:—			
Recoveries and other			51.180
Total Income during the year. ...			2,29,8:27
Incidence of Tax per head of population (2—6)		Rs.	7/4/3
Incidence of Revenue		„	8/14/1

Hospital and Dispensaries			53,998
Medical officers of health, Sanitary Inspectors, etc.			19,456
Other Sanitary requirements			23,724
Arboriculture, gardens, etc.			9,087
Other, Veterinary, Registration, birth death			
Public Works { Establishment	15,571		
Public Works { Buildings	4,092		
Public Works { Roads	1,50,186		
Public Works { Stores	989		
			1,70.838
			9,80,563
D. Public Instruction:—			
Schools and Colleges			1,74,404
Libraries, Museums, Repairs of School Buildings ... —			21,795
			1,96,199
E. Contribution for General purposes:—			16,328
F. Miscellaneous, Printing. Law, Provident Fund			3,43,945
Rents—Interest			46,760
			3,90,705
Investment and deposit			78,328
GRAND TOTAL			18,92,475

§ 25. **Functions of District Boards.**—Below is a list of the functions of a District Board.

Their obligatory duties are the management of the Board property; the construction and maintenance of public roads and means of communications with planting and preservation of trees on the roadside; the establishment, management and maintenance of hospitals, dispensaries, public parks, markets, sarais and inspection-houses; the construction and repairs of school buildings, training of teachers and establishment of scholarships; the provision of a sufficient supply of pure water and its prevention from pollution, and the arrangement for vaccination, etc.

They *may* also administer any crown lands in their area; construct and repair embankments for the storage and supply of water for agricultural purposes; reclamation of swamps and unhealthy localities; construct and maintain relief works and relief houses and take measures to alleviate the sufferings of Famines; and arrange for the registration of births and deaths.

§ 26. **Sources of District Board Revenue.**—Their most important source is the Government grants for particular purposes, specially educational and medical. Local rates and cess levied upon agricultural lands to the maximum of 10% of the revenue borne by such lands is another important source. They can levy taxes on the circumstances and property of non-agriculturists. Other heads are fines realized from cattle-pounds, income from tolls and ferries and receipts from markets, shops and other Board property.

Income of the District Board, Benares, 1945-46

	Rs.
1. Govt. Grant.—	
Education—Recurring	
Medical	
Public Health	4,10,534
2. Local Rates.—	
(Rates, Acreage cess, Road cess, & Receipts from surrendered jagirs.)	108745
3. Taxes.—	
Tax on circumstances and property ...	35000
4. Pounds (cattle-pounds receipts)	3187
5. Education. (Fees in Schools Hostel and others.)	61817
6. Medical. (Interest on securities, contribution from local bodies and others	6552
7. Public health	215
8. Markets and shops (Tehbazari)	471
9. Receipts from property (Rents from Nazul buildings and lands. staying bungalows and inspection-houses)	556
10. Agriculture and arboriculture. (Sale of trees, Sale of fruits, etc., ...	3101
11. Interest	656
12. Miscellaneous (contribution from private persons sundry receipts)	2478
TOTAL INCOME	633312
13. Extraordinary and Debt	10493
	644805

Expenditure of the District Board Benares 1945-46

	Rs.
1. General Administration-officers, establishment, stationery, printing and collection charges ...	33144
2. Pounds. Estate ; Contingencies, repairs ...	2788
3. Education. (Administration and Inspection, V. Middle, Pr. boys. Training Schools, Primary, Islamia. Depressed classes, Female education, Compulsory primary for boys, etc.)	486238
4. Medical. Western and Indigenous ...	36400
5. Public Health. (Establ. allowance, Publicity, water supply, vaccination,) ...	16439
6. Veterinary	6761
7. Agriculture and arboriculture	6780
8. Public works, Direction (Engineer, overseers, contingencies, dak-bungalows,) Repairs. Roads non-metalled etc.	49145
9. Superannuation other than Education) ...	3287
10. Refunds:	200
11. Miscellaneous, law charges and others ...	1028
	642210
12. Extraordinary and Debt Investment in Govt. Securitities and S. Banks, Deposits and others 1210	10343
TOTAL DISBURSEMENT ...	652553

Items of District Board Revenue

Government Grant.—It constitutes the biggest source of income of the District Board. It is contributed by the provincial government towards expenditure incurred by the Board mainly on education and, to some extent, on Medical Relief and Public Health.

Local Rates.—Of these rates the most important is the land cess or acreage cess which the District Boards have the right to impose on cultivated lands to the extent of 10 per cent of the revenue borne by them. Road cess is a special imposition the receipts from which are applied to the construction and repairs of District Board roads.

Tax on Circumstances and Property.—Agricultural incomes are free from income-tax, but a tax is imposed on the value of houses, other property and income from trade and professions of rural population and it is called 'Haisyiat' tax. The rate of tax in some places is Re. 1/- per cent up to Rs. 600/- beyond which it is doubled.

Pounds & Ferries.—Income under pounds (where accruing) is derived from fines imposed on the owners of cattle impounded in kine-houses, the rates charged differing according to the schedule in which the impounded animal falls. Ferry charges are payments received for services of transportation across the rivers which the Board arranges for either by boats or bridges.

Education.—The main source of revenue is the fees realized from scholars attending District Board schools or residing in school hostels; while income under *Medical* is from contributions made by local bodies towards providing medical relief in rural areas.

Markets and Shops.—Rent is realized from shopkeepers who use the Board's land in places where

bazaars are held and also from people who hire Board shops for their business purposes.

Receipts from Property—include rents from *nazul* land and buildings and rents paid by officials and non-officials who use dak-bungalows and inspection-houses.

Agriculture and Arboriculture.—This income is from the sale-proceeds of the dry trees and fruits of trees situated on the District Board roads.

Items of District Board Expenditure

On the expenditure side are the amounts spent respectively on the administration, services and functions performed by the District Board, the biggest item being *Education* that accounts for more than 7/10 of the total expenditure. Apart from *General Administration* (which includes the pay of officers, establishment charges, cost of stationery, printing and cost of collecting taxes and rates), the main items of expenditure are *Public Works*, *Medical*, *Public Health* and *Veterinary*. Public Works expenditure includes the pay of the engineers, overseers and departmental contingencies, and the construction and repairs of roads and dak-bungalows. Medical relief is of both Eastern and Western systems, the former receiving excessively partial favour against the indigenous system. Dispensaries and 'Dawakhanas' are maintained at the Board's expense while many private medical practitioners receive grants from it. Expenditure under Public Health includes the pay of the health officer and sanitary inspectors and their allowances, cost of publicity and propaganda on health and cleanliness, vaccination expenses and supply of water. Veterinary branch is maintained to provide medical treatment to cattle in rural areas.

The minor items are *Pounds*, expenditure on which is for repairs and contingencies; on *Fairs* and *Exhibition* for the organization of which the Board

makes some contributions; and on *Arboriculture* for planting trees on road sides.

EXERCISES

1. What do you study under Public Finance? How do state and private budgets differ from each another? Discuss the functions of a Government.

2. State and discuss the main heads of Revenue Expenditure in the Central Budget. What comments have you to offer on the changes in various items brought about by the War?

3. Define "Tax." What is meant by the base of a Tax? Distinguish between *ad valorem* and specific taxes. Explain clearly the meaning of 'Incidence of a tax.'

4. Distinguish between a direct and an indirect tax, and compare the merits of both. Which of the taxes in India are direct and which indirect?

5. If the Indian import duties on all kinds of cloth were largely increased, who would bear the burden of this tax and who would profit by it? Will the revenue of the Government be necessarily increased by such a change?

6. Are there any taxes on profits in India? Who pays these taxes? Are they partly or wholly shifted? Who bears the burden of them?

7. Do poor people pay no taxes? If they do, how do they pay them? What are the special advantages of an income-tax?

8. Discuss the merits and demerits of direct and indirect taxes. Under what circumstances would an export duty on a given commodity be desirable?

9. What objections have you to the following taxes:
(a) Salt-tax; (b) Excise duty on cotton and sugar;
(c) Octroi?

10. Write a short note on the principal heads of revenue and expenditure in the budget of the Government of your province. Is the provincial revenue adequate for provincial needs?

11. What are the principal sources of income of the Municipality of your town? Enumerate the items on which the Municipal funds are expended.

12. Give a statement showing the important heads of revenue and expenditure of the District Board with which you are familiar. Comment on each item of expenditure.

LIBRARY